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MARKETING SERVICE PROGRAMS

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U. S. DEPARTMENT OF AGRICULTURE

CONDUCTED BY
STATE DEPARTMENTS OF AGRICULTURE
UNDER THE
AGRICULTURAL MARKETING ACT OF 1946
IN COOPERATION WITH
U. S. DEPARTMENT OF AGRICULTURE
OCTOBER 1, 1957 – SEPTEMBER 30, 1958

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
WASHINGTON, D. C.

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June 1959

MARKETING SERVICE PROGRAMS

conducted by
STATE DEPARTMENTS OF AGRICULTURE
under the Agricultural Marketing Act of 1946

In cooperation with U.S. Department of Agriculture
(October 1, 1957-September 30, 1958)

INTRODUCTION

Marketing service programs conducted by State departments of agriculture under the matching-fund authority of the Agricultural Marketing Act of 1946 were started in 1947 with 21 States participating. In 1957-58, these programs were carried on in 41 States, Hawaii, and Puerto Rico. All of the programs are described in this comprehensive report. The States are:

Alabama	Maryland	Oklahoma
Alaska	Massachusetts	Oregon
Arkansas	Michigan	Pennsylvania
California	Minnesota	South Carolina
Colorado	Mississippi	South Dakota
Florida	Missouri	Tennessee
Georgia	Montana	Texas
Illinois	Nebraska	Vermont
Indiana	New Jersey	Virginia
Iowa	New Mexico	Washington
Kansas	New York	West Virginia
Kentucky	North Carolina	Wisconsin
Louisiana	North Dakota	Wyoming
Maine	Ohio	

These programs are designed to help marketing agencies at the various levels of distribution adopt new techniques and methods for performing marketing operations discovered or developed through research under the act, show these marketing agencies and producers how to improve or maintain the quality of products during marketing, provide producers and marketing agencies with new, more timely and complete marketing facts and information, and expand markets for farm products.

The Liaison Office, Matching Fund Program, Agricultural Marketing Service, provides guidance and assistance to the States in conducting these programs. That office assisted in planning and conducting the annual National Marketing Service Workshop, held at Memphis, Tenn., November 5-7, 1957. The 154 representatives from 40 States and Territories and the U.S. Department of Agriculture attending this workshop considered the problem of expanding outlets for agricultural products and how State departments of agriculture could improve the effectiveness of their programs having this objective.

General guidance to the matching fund program is provided by the Advisory Committee on Cooperative Work under the Agricultural Marketing Act with State departments of agriculture. Members of that committee in 1957-58 were: L. Y. Ballentine, North Carolina, chairman; C. J. Carey, 1/ California; George H. Chick, Maine; Roy Freeland, Kansas; and Stillman J. Stanard, Illinois.

To improve the operation of their programs and prevent duplication of effort, the State departments of agriculture maintain close cooperation with industry and trade groups, State extension services and agricultural experiment stations, vocational educational agencies, and the U. S. Department of Agriculture.

These programs are conducted under cooperative agreements between the State department of agriculture, or similar agency, and the U.S. Department of Agriculture. Individual projects are initiated by the States and approved by the Agricultural Marketing Service. Allotments were made to the States to conduct 126 projects during the period covered by this report. These projects were divided among the following 4 major fields of work authorized under the act:

1. Maintaining product quality

State departments of agriculture give first-hand assistance to producers and marketing agencies in determining the causes of quality losses and in taking corrective actions. Such work often involves detailed plant and retail store surveys to spot the places and operations where bruising, contamination, and other causes of quality losses are occurring, followed up by consultations with plant or store management concerning the problems found and first-hand assistance in adopting recommended corrective measures. Demonstrations of official grades and standards and the advantages of improved containers in retaining quality are given producers and marketing agencies in furtherance of the quality maintenance work.

2. Expanding market outlets

Work in this field is directed at increasing consumption of products in chronic oversupply as well as finding outlets for local

1/ Deceased.

seasonal surpluses. In helping to accomplish the latter objective, the States provide more timely and reliable production and marketing information and develop an improved communication system with potential buyers. Programs conducted to cope with longer-term surplus problems are of necessity more complicated and varied. Frequently, basic changes in grading, packaging, processing, and distribution methods are necessary to achieve increased consumption on a sustained basis.

3. Reducing costs through improving efficiency of marketing facilities and operations

Under the projects in this field, State departments of agriculture help producers and marketing agencies design new or remodeled facilities, select equipment, plan layouts and adopt work methods which speed output, reduce labor requirements per unit, and reduce costs. Assistance also is provided in determining the most effective locations and efficient sizes of new facilities such as livestock auctions, poultry processing plants, grain elevators, milk plants, fruit and vegetable assembly markets, and food distribution centers.

4. Providing new basic data and market information

a. Developing information and basic data useful in planning marketing programs. New information and basic data on both a State and local-area basis, relating to trends in production, changes in consumer demand, the competitive situation in markets, storage holdings, and rate of disappearance, are collected, analyzed, and disseminated by Federal-State statisticians in the various States. These data are of value to producers and marketing agencies in planning programs. Information to provide a more dependable basis for crop estimates and projection of production trends is obtained through censuses of tree numbers and objective samplings of crops at various stages of growth.

b. Improving market news. With the trend toward decentralized packing and processing, the bypassing of terminal markets, and direct selling at country points, the need has increased for market news information at the local market level. To meet this growing need, experimental market news coverage is being provided for local markets not heretofore reported. If successful, the States may incorporate these programs as a part of their regular market news service and support them entirely with State funds. If not, they are discontinued.

This progress report, prepared from material submitted by the States, presents (1) the types of marketing service programs by major commodities, (2) summaries of work by States and projects, and (3) a list of recent publications issued in connection with the projects.

Fruits and Vegetables

During the past year, the following 32 States and Territories conducted marketing service programs designed to improve the marketing of fruits, vegetables, and tree nuts: Alaska, California, Colorado, Florida, Georgia, Hawaii, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New Mexico, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Puerto Rico, South Carolina, Texas, Virginia, Washington, West Virginia, and Wisconsin. By major fields of work, 26 of these States were engaged in improving quality, 23 in expanding outlets, 16 in improving efficiency, and 23 in providing new basic data and new and more timely marketing information.

The following examples illustrate the types of activities State departments of agriculture engage in to improve the quality of these commodities:

The Maryland Department of Markets assisted sweetpotato processors in developing new color standards for canned sweetpotatoes designed to reduce the variability in the color of the product and improve consumer acceptance. Following the development of these standards, the Department of Markets helped processors in testing their use under operating conditions and aided both processors and growers in developing appropriate contracts covering the acquisition of the raw product.

New Jersey embarked on a program to encourage the use of standard grades in the sale of fruits and vegetables through roadside markets and to establish minimum levels of quality for products sold through these outlets. Roadside markets are an important outlet for New Jersey fruits and vegetables, but the full potentialities of this method of marketing have not been realized because of the quality problem. Activities of the New Jersey department resulted in the development of a plan for improving the operations of these markets and in the formation of an organization of roadside market operators known as Jersey Certified Farm Markets, Inc., to place the plan in use. During this initial year of operation, 35 markets having an average annual volume of $30,000 each joined the organization. As many additional markets have requested membership, the New Jersey department will have additional responsibilities in explaining the program and in showing these new operators how they can acquire and maintain the status of a certified market.

In Virginia, the State Department of Agriculture assisted in organizing a vegetable growers' association as the initial step in improving the quality and packaging of products offered to the trade. The association was helped

in setting up a centralized grading and packing operation, in training employees in proper grading methods, in selecting the types and sizes of packages to be used, and in contacting large-volume buyers. Growers selling through the association received about 25 cents per package more than growers selling individually and were able to sell all of their "marketable production," which was not the case with many of the growers outside the association.

In cooperation with the Washington State Apple Commission, the Washington Department of Agriculture conducted a program to assist 158 apple packinghouses in improving their packs with respect to adherence to grade and size standards, net weight variability, and workmanship. Samples of packs from each house were scored on each of these factors, the results analyzed and reported back to each house. The report provided each house with a measure of the performance of individual workers on the packing line, the performance of the plant as a whole, and how it stood with regard to the industry average and range.

Various techniques and approaches are used by the States in their efforts to expand outlets for fruits and vegetables. These range all the way from furnishing information to buyers about the quality, quantity, location, and marketing period for a product to providing services to wholesalers and retailers in the consuming markets in the promotion of particular products.

The buyer informational bulletin is used by several States to encourage wider distribution and improve demand for fruits and vegetables. A popular method of presenting this information is through maps of the State on which crop and marketing data by specific locations are presented. Georgia, Illinois, Kentucky, Missouri, New Mexico, North Carolina, and Virginia used this method.

The Maine potato promotion program is a good example of a program where particular emphasis was placed on work with wholesalers and retailers in consuming markets. During the marketing season, marketing specialists of the Maine department visited 193 markets in 28 States to explain the Maine quality and promotion program to wholesalers and retailers, observe the quality and condition of Maine potatoes being received in these markets and report back to shippers complaints and suggestions for improving the acceptance of the potatoes, provide retailers with point-of-sale material purchased by the Maine Potato Commission and show them how to use it most effectively in building store displays, and arrange with food editors and radio and TV stations for free publicity concerning the Maine program. These activities contributed to an orderly movement of the 1957 Maine potato crop.

In the Virginia apple promotion program, a balanced use was made of various techniques and approaches. Informational bulletins were sent to buyers at the start of the season to focus their attention on the Virginia supply and quality situation. In cooperation with the Virginia Apple

Commission, specialists also visited important markets ahead of the active shipping season to arrange special publicity and promotion programs. During the shipping season, these specialists made followup visits to the markets to assist wholesalers and retailers in conducting these programs and to observe the quality and condition of apples arriving in the markets from Virginia. Specialists also prepared special promotional exhibits which were placed on display at conventions of food dealers, restaurant operators, and others. Following the shipping season, they conducted meetings with apple growers and shippers to discuss improvements in grading, sizing, and packaging which the surveys in the markets indicated were needed to improve acceptance. Similar meetings were held with the Virginia Apple Commission to evaluate the effectiveness of the promotional effort and to devise improvements based on the experience gained during the marketing season.

Several States initiated or expanded work with fruit and vegetable marketing agencies designed to increase marketing efficiency and reduce marketing costs. Wisconsin got underway a program to help cherry processors evaluate their operations and determine where improvements in labor efficiency and in the use of equipment could be made. Specialists in North Carolina helped a group of sweetpotato growers to develop a marketing organization which could more effectively represent them in the markets and to design central facilities for curing and storing sweetpotatoes which would permit the use of highly efficient handling equipment and also minimize storage losses. Georgia, Maryland, and Virginia continued work with market authorities in those States in the planning and construction of new food terminals.

The New Jersey Department of Markets as a phase of its regular marketing service program has worked for many years with local assembly markets to improve their efficiency. This work was expanded last year under a matching fund project to include assistance to farmers' roadside markets and several new marketing agencies. Assistance was given one of these new agencies in installing and operating a vacuum cooling system for leafy vegetables.

New York assigned two specialists to help wholesalers and retailers in that State in improving the efficiency of handling, preparing, and displaying fruits and vegetables. Assistance also was given by specialists of the New York department to an apple packinghouse in installing and testing an improved packing line incorporating several items of equipment developed through research.

Most of the States having matching fund projects in the fruit and vegetable commodity field are concerned with improving and expanding the data and information needed by producers and marketing agencies in making both short-term and long-range marketing decisions. Activities in this area included developing better acreage and production data and issuing more timely and detailed reports based thereon, making tree censuses, developing more objective methods of estimating production, and conducting experimental market news programs.

Dairy Products

Programs designed to improve the marketing of dairy products were conducted in 26 States during the year. These were Alaska, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, Mississippi, Missouri, Montana, New Jersey, New York, North Carolina, North Dakota, Oklahoma, Pennsylvania, South Dakota, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Of these States, 14 carried on activities to improve the quality of milk received by processing plants and that of the processed products. To improve the quality of the raw product, producers were shown how to reduce bacterial and antibiotic contamination and to eliminate off-flavors and off-odors. Processors of products such as butter and cheese were shown how to identify the sources of contamination interfering with the development of desirable structure and flavor. Usually, programs at the producer and plant levels were carried on simultaneously and coordinated so that improvements made in the raw milk supply, for example, would carry through in the finished product.

In Minnesota, the State Department of Agriculture concentrated its quality improvement program with 56 dairy plants in Kittson, Marshall, Pennington, Polk, Red Lake, and Roseau counties. A mobile laboratory was stationed in this area so that sources of quality problems in the plants could be quickly identified and corrective measures taken to minimize the volume of product downgraded because of inferior quality. A series of meetings was held with creamery operators in the area to discuss this work and to present recent findings regarding methods of improving quality and achieving greater uniformity of product.

In cooperation with the Extension Service, the Massachusetts Department of Agriculture initiated a program to improve the flavor of fluid milk retailed in the State. This program is patterned after and coordinated with the one which has been underway in Vermont for several years. The procedure is to collect samples of fluid milk from various sources, subject them to laboratory examination and to evaluation for quality by taste panels. Reports of these tests are furnished the processing plant involved. Where needed, assistance is given the plant in eliminating the flavor defect.

In Wisconsin, quality improvement work continued on a broad front. The work with cheese factories was concentrated on improving the quality of the milk supply by reducing bacterial and antibiotic contamination; that with plants producing nonfat milk powder was concerned with improving the plants' fieldwork program, the condition of milk transport tanks, receiving room operations, cooling procedures, and the sanitizing of plant equipment; that with plants manufacturing cottage cheese had to do with quality evaluation of the product and assistance to plants in correcting quality defects; activities with plants producing whey cream butter were directed at helping the plants determine proper time and temperature controls, resolve problems

associated with starter influence and rennet action, determine which fractions of whey cream not to use in butter manufacture, and demonstrate through storage tests the most effective temperatures for storage of whey cream butter of different initial qualities.

Most States carry on some activities designed to promote milk and dairy products with either regular or matched funds. Alaska, Georgia, Illinois, Indiana, Kansas, Maine, Minnesota, Mississippi, Missouri, Montana, New York, North Carolina, and North Dakota did this work under matched fund projects.

Illinois, encouraged by results obtained the preceding year with a few plants in promoting cottage cheese, expanded the program to cover a 5-county area in the State. The first phase of this expanded program consisted of a series of meetings with cottage cheese processors conducted in cooperation with the Department of Food Technology, University of Illinois, to plan specific phases of the promotion, evaluate the quality of samples of cottage cheese produced by each plant, and explain procedures for improving quality. Merchandising representatives of the Pacific Coast Council Pear Service and the California Cling Peach Advisory Board attended these meetings and demonstrated to the processors how display and point-of-sale material could be used most effectively and how tie-in sales of canned pears and peaches with cottage cheese could be made to give maximum total sales effect. These agencies and the American Dairy Association of Illinois cooperated in the promotions which followed this series of meetings. The 12 processors cooperating in the promotion experienced an average increase of about 20 percent in sales during Lent.

Only a few States have initiated activities under matched fund projects to improve the efficiency of assembling, processing, and distributing milk and dairy products. Last year Wisconsin surveyed 22 processing plants that use about 1.2 billion pounds of milk annually, and made cost analyses of the various operations. The information disclosed by the survey of each plant was presented to and discussed with plant managers, along with generalized data for all plants in the same classification with respect to the types of products manufactured. Cost differences of as much as 30 cents per hundredweight of milk processed were revealed by the surveys of plants within the same classification. It is reported that this work stimulated most of the plants involved to effect improvements in equipment, plant layout, and operating methods which enabled them to reduce handling and processing costs during the year by about 5 cents per 100 pounds of milk received. For the 17 plants which made these improvements, savings amounted to approximately $325,000. Mississippi and Indiana also did some work in this field during the year.

Projects to improve local and State data on the production, distribution, utilization, storage holdings, and pricing of milk and dairy products were underway in Alaska, Louisiana, Minnesota, Mississippi, New Jersey, New York, Pennsylvania, South Dakota, Virginia, West Virginia, Washington, and Wisconsin. Mississippi continued the collection of monthly data on Grade A dairies and

prepared county estimates of the number of such dairies, number of dairy cows, size distribution of herds, total Grade A milk production, and methods of marketing. Wisconsin prepared and issued a bulletin on the trends in the butter industry in that State which brought together information on the various aspects of butter marketing, sources of butterfat used by type of milk or cream, butter production by counties, and the increasing concentrations of volume in fewer plants.

Poultry and Eggs

Marketing service programs designed to improve the marketing of poultry and eggs were conducted last year in 31 States, a gain of 7 States from the preceding year. The additional States are Colorado, Florida, Minnesota, Pennsylvania, South Carolina, South Dakota, and Washington. These States, together with Alaska, Alabama, Arkansas, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Mississippi, Missouri, Montana, New Jersey, New York, North Carolina, Oklahoma, Tennessee, Texas, Virginia, West Virginia, and Wisconsin, made up the group with active programs last year.

Nineteen of these States had programs to improve or maintain quality by assisting producers and marketing agencies in adopting new equipment and methods to achieve better sanitation, grading, packing, handling, and cooling of poultry and eggs. In Illinois three grading clinics were held during the year to train producers and employees of egg dealers and retailers in proper methods of grading and candling eggs and in the interpretation of official egg quality standards. Specialists of the New Jersey Department of Agriculture conducted an intensive egg quality improvement program at both the producer and distributor levels. Quality surveys were made of the operations of about 700 producers and 51 distributors licensed under the New Jersey State Seal of Quality program. This quality work was undertaken to implement the program of the New Jersey Poultry Products Promotion Council to expand outlets for New Jersey eggs. Several States, including Arkansas, Georgia, North Carolina, and Tennessee, gave assistance to poultry processors in determining what changes were needed in facilities, equipment, and plant layout to comply with the National Poultry Products Inspection Act.

Programs to expand outlets for poultry and eggs were conducted in 22 States. Activities of the States in this field of work generally were coordinated with those of industry groups. For example, in Georgia the Georgia Egg Association has the primary responsibility for promoting increased egg consumption. The Georgia Department of Agriculture assisted this association in all phases of its promotional program and was responsible for developing and presenting a series of TV shows to promote eggs. The New Jersey Department of Agriculture helped the New Jersey Poultry Products Promotion Council in planning a promotion campaign for New Jersey eggs. Assistance was given the Council in planning a consumer preference survey, the results of which were used in determining the media and techniques to be used in the promotion, in designing point-of-sale material,

and in developing procedures for identifying State Seal of Quality eggs and poultry. In cooperation with Pennsylvania State University, the Pennsylvania Department of Agriculture staged an intensified egg promotion campaign in one city in the State to test various promotional techniques and to serve as a model for the introduction of State of Pennsylvania Certified Eggs in other cities.

Seven States provided assistance to egg packing and poultry processing firms in designing and remodeling facilities, planning equipment layouts and floor space allocations, selecting equipment best suited to their operations, and training workers in the most efficient work methods. The North Carolina Department of Agriculture assisted 23 poultry processing plants with problems of this type. Specialists of the Virginia department analyzed the operations of 8 egg candling and packing plants as a basis for determining what changes were needed in equipment layout and work methods to reduce costs. These surveys involved the elements and items of pickup, sampling, candling, in-plant handling, and packing materials. It was found that savings of as much as 50 cents per case (30 dozen) could be made through the adoption of improved equipment and handling methods. Two of the plants surveyed decided to establish entirely new facilities on the basis of the survey data. The Virginia department is continuing to work with these plants in the planning of the new facilities.

Michigan, Missouri, and New York continued experimental market news programs designed to provide information on supplies and prices of eggs and poultry at the local market level. Maryland completed a much-needed statewide laying flock survey to provide the egg industry with a better understanding of the marketing problems facing egg producers and buyers. The results of the survey were published during the year and covered such items as layer and replacement numbers, breeds, egg production, source of laying stock, sales outlets utilized, and methods used in controlling egg quality. The phenomenal growth of the poultry industry in Georgia in recent years has given rise to the demand for a comprehensive publication showing the current status and trends for the State and individual counties. In response to this demand, the Georgia Crop Reporting Service issued during the year two statistical handbooks on the industry entitled "Poultry Facts" and "The Egg and Georgia." The latter report was devoted largely to a comparison of production, rate of lay, price, and consumption of eggs in Georgia and competing States.

Livestock

Alaska, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Missouri, Minnesota, New Jersey, Nebraska, North Carolina, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Virginia, Washington, West Virginia, Wisconsin, and Wyoming conducted programs during the year to improve the marketing of livestock and livestock products.

Some of these States, including Illinois, Iowa, Minnesota, New Jersey, Nebraska, Ohio, South Dakota, South Carolina, and Washington, confined their

programs to basic data and marketing information; the others pursued broader programs involving quality improvement, expansion of outlets, and increasing efficiency.

Demonstration and promotion of the use of official grades in buying and selling represent the main effort in several States. This is the phase of livestock marketing being most actively considered by most of the other States which are expanding their livestock marketing programs. Georgia, Indiana, Kentucky, North Carolina, Tennessee, Virginia, West Virginia, and Wisconsin are at varying stages in the development of programs to encourage the buying and selling of livestock on a merit basis.

In Virginia, this effort got underway at a comparatively early date and progress has been accelerated in recent years under a close working relationship developed between the grading service and marketing specialists of the Virginia department assigned to a matching fund project in livestock marketing. Currently, a major objective of the Virginia program is to stimulate the marketing of meat-type hogs through the development of a live-grading program and the purchasing of hogs on a graded basis. Several of the important packing plants in the State are cooperating in this effort. One phase of the matching fund work last year related to improvement in live-grading. Specialists helped to train graders in live-grading techniques and showed graders how to improve in accuracy. As a result of these efforts, the Virginia grading service was able to achieve an accuracy of about 80 percent in grading live hogs. Under another phase of the work, specialists demonstrated live-grading methods to producers to help them avoid over- or under-finishing their hogs and the resulting downgrading. Producers cooperating in this program were able to increase the percentage of U.S. No. 1 hogs, for which they obtain a price premium of about 75 cents per 100 pounds over U.S. No. 2 hogs and $1.25 per 100 pounds over U.S. No. 3 hogs, from about 43 percent at the start of the program in May 1957 to approximately 61 percent during the first half of 1958. Further improvement in the quality of hogs is being attempted by helping producers select meat-type breeding stock and by establishing special feeder pig sales where pigs are officially graded and sold on the basis of grades.

Comparatively few States have developed programs to improve the physical handling of livestock and meat in marketing channels. North Carolina entered this field during the year by providing assistance to a local packing firm in designing new slaughtering and packing facilities. Kansas, Maine, and Virginia helped in organizing and conducting clinics to demonstrate to retailers proper methods of cutting, trimming, displaying, and pricing meat.

The quarterly pig surveys represent the main effort of the States to improve livestock marketing information under matching fund projects. Kansas, Illinois, Iowa, Indiana, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin were the 10 States carrying on this activity last year.

Grain and Seed

Activities to improve grain and seed marketing were carried on by Alabama, Georgia, Illinois, Indiana, Kansas, Kentucky, Maryland, Minnesota, Mississippi, Montana, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Texas, Virginia, Washington, and Wisconsin.

The programs in Alabama, Georgia, North Dakota, and Oregon were concerned primarily with improving or maintaining quality. North Dakota conducted 22 countywide programs designed to prevent rodent and bird contamination in cereal grains. Contaminated grain at present grain price levels is reduced in value by about $1 per bushel. This program is important to the State in protecting the value of the approximately 100 million bushels of grain stored on North Dakota farms and in its elevators.

The program in Georgia has to do with improving the quality of both grain and seed. Unfavorable weather during the 1957 peanut harvest threatened to create a serious shortage of seed peanuts. Assistance was given peanut shellers in reducing mechanical injury in the shelling process and in improving the fungicidal treatment given to peanuts. The resulting improvement in the quality of the peanuts for seed purposes not only averted the shortage but improved returns from the crop.

Quality aspects also were important in the grain marketing programs of Indiana, Kentucky, Maryland, North Carolina, and Virginia. These States stressed the importance of buying and selling grain on the basis of official grades. Most of them provided services to producers and elevator operators in improving storage facilities and in installing aeration systems to prevent losses from excessive moisture and temperature.

Georgia, Indiana, Maryland, North Carolina, and Virginia helped in the design of new storage and elevator facilities, in the selection and installation of proper grain handling equipment, and in promoting efficient organization of buying and selling activities. One phase of the Maryland program, for example, related to improvement in the practices of loading and shipping grain. One railroad requested 100 copies of a release which the Maryland Department of Markets prepared on this subject. Work on this phase of grain marketing in Maryland is helping to resolve a problem in the weighing of grain at terminal elevators which will be to the financial advantage of county grain dealers and producers.

The North Carolina department assisted two grain firms in converting to the solvent method for extracting oil from soybeans, which has enabled these firms to secure an additional oil yield of about 4 percent.

Most of the States having grain marketing programs included activities to provide new and improved basic data on acreage, production, varieties, quality, and storage holdings; also information on movement, supplies, and prices of grain. The Kansas Board of Agriculture, for example, made a detailed

county-by-county survey of commercial grain storage capacity and the percentage of capacity in use prior to the 1958 grain marketing season. This information was useful to wheat growers, railroads, elevator operators, and grain firms in planning an orderly marketing of the near record 1958 Kansas wheat crop. Illinois provided producers and users of grain with data on the production of various grains and seeds by varieties and by crop reporting districts. Producers and seed companies need this type of information in planning seed procurement and sales programs. Manufacturers of grain products have preferences for certain varieties in their processing operations. Knowledge about the supply of a certain variety and where it is concentrated in the State helps these manufacturers in making marketing decisions.

Other Commodities

State departments of agriculture also helped producers and marketing agencies in improving the marketing of several other commodities, such as cotton, tobacco, honey, maple syrup, and nursery and forest products.

The following summary describes, in greater detail and project by project, the activities and accomplishments of each of the States in the program during the reporting year.

SUMMARIES OF MARKETING SERVICE WORK BY STATES AND BY PROJECTS

ALABAMA

Improving and maintaining quality (seed) (ALA-A-1)

In its seed quality improvement program last year, the Alabama Department of Agriculture made nearly 700 contacts with processors throughout the State to assist them in selecting the most efficient seed cleaning and conditioning equipment and in adopting proper handling and cleaning methods. A highlight of this year's program was a seed processing machine exhibit developed by department personnel and displayed at seven agricultural fairs throughout the State. The personnel supervising the display also demonstrated and explained proper methods of cleaning seed and the advantages of proper seed cleaning procedures. About 35,000 persons observed the display at these fairs.

In addition to the individual contacts with processors to promote the improvement of seed quality, specialists conducted meetings with producers and processors at which the various factors of seed quality, methods of cleaning seed, and the operation of various types of seed cleaning machinery were demonstrated and explained.

The improvement made under this program in the quality of locally grown seed has substantially increased the demand for it by farmers in Alabama and adjoining States.

Improving quality and expanding outlets (poultry and eggs) (ALA-A-2)

Quality improvement continued to receive the major emphasis under this program; however, there was some increase in activities designed to promote greater poultry and egg consumption within the State. In view of the sharp expansion taking place in Alabama's poultry and egg industries, an increase in promotion work appears to be justified.

Several approaches were used in stimulating producers and marketing agencies to adopt proper quality control procedures and to use official grades in buying and selling. Demonstrations relating to the factors of egg quality, the importance of proper temperature and humidity control, and methods of candling, grading, sizing, and labeling were given at farms, grading plants, meetings of producers and egg dealers, and State and county fairs. Particular efforts were made to help new producers and marketing firms develop quality control programs.

Promotional activities of the Alabama department included participation in a turkey promotion campaign before the holiday season and in the national egg promotion in March. In behalf of the turkey promotion campaign, marketing specialists of the department prepared script for radio and TV stations over the State and made personal appearances on programs in the major cities. They also called on hotels, restaurants, and other food-serving establishments to encourage their support of the campaign by increasing the use of turkey in their menus. Specialists prepared and assembled material relating to the grades and weight classes of eggs and recipes for egg dishes which was carried in a leading newspaper during the March egg promotion.

ALASKA

Improving quality and handling methods, expanding outlets, and furnishing market information (ALAS-A-1)

Potatoes.--Special emphasis was placed on issuing quarterly reports of potato stocks on hand and on the rate of disappearance of stocks compared with the preceding year. It was reported that the dissemination of these reports helped improve the market for potatoes, resulting in an estimated additional return of about $30,000 to Alaska's producers. Marketing specialists also assisted growers in adopting proper methods of grading, packaging, and handling potatoes. In connection with this phase of the program, growers were advised on grade problems, trials were made on washing potatoes before storage, and bulk handling potatoes by forklift equipment was tried out in several refrigerated warehouses.

By adopting the recommendations of the Alaska Department of Agriculture with respect to storage practices and the application of sprout inhibitors, producers were able to prolong the marketing season and take advantage of the higher prices which normally prevail during the period when the State is dependent on outside sources of supply.

Vegetables.--During the past year specialists gave individual assistance to growers on problems of grading, handling, and packaging. Estimates on planted acreages also were released to inform growers and handlers on the probable production of vegetables.

Eggs.--Work in egg marketing, conducted with about 60 wholesalers and retailers, emphasized the proper rotation and handling of stocks in storage.

Milk.--The Alaska department continued work with dairies throughout the State on quality and distribution problems. Marketing specialists assisted in the planning of a milk processing plant at Homer. This plant will improve the availability of milk and dairy products from the Matanuska Valley and reduce costs of processing and handling.

Livestock.--The Alaska department continued work to improve the marketing of cattle produced on Kodiak Island. Surveys and tests were conducted to determine if it would be profitable for producers and to the advantage of consumers to improve the slaughter grade of cattle by finishing on grain and silage. By grain finishing grass-fat steers produced on Kodiak, producers can extend the slaughter season, thus providing consumers with local beef of more acceptable quality and over a longer period.

Grains and feed.--Assistance was given the Matanuska Valley Farmers Cooperative Association in planning a new elevator and in the installation of a drier. The department also was instrumental in bringing about an increased use of portable driers in the valley which improved the quality and decreased losses of feed grain.

ARKANSAS

Improving egg quality and egg marketing operations (ARK-A-1)

The Arkansas Livestock Sanitary Board continued work to improve egg quality through demonstrations at farms, at meetings, grading schools, packing plants, and retail stores of proper methods of candling, grading, and sizing. Such demonstrations were given at 33 meetings held over the State for the general purpose of strengthening the Arkansas egg quality program. Assistance was given 60 retail stores in setting up their own grading and packing departments. In addition to quality aspects, the board's activities included assistance in the selection and layout of equipment and the adoption of more efficient work methods. Similar assistance was given to 3 egg packing plants.

Considerable work was done during the year to improve egg assembly operations. As an example of this, marketing specialists were instrumental in arranging for contract haulers of milk to pick up and deliver eggs from farmers to packers and processors.

Specialists of the board assisted in formation of the Arkansas Egg Council, composed of producers, packers, retailers, and representatives of

farm organizations. This organization will be concerned with the problems and policies of the egg quality program. The board undertook a new line of activity during the year which involved assistance to the egg industry in developing outlets for eggs not usable for human consumption.

Benefits of the work under this project are being revealed by the marked improvement in egg quality at the retail level. It is estimated that the volume of Grade A eggs sold at retail has more than doubled during the past year. Consumers have been willing to pay a premium of about $0.15 to $0.20 per dozen for eggs of this quality over ungraded eggs.

CALIFORNIA

Improving quality and packaging (CALIF-A-1)

This project is concerned with the development of improved standards of quality and maturity for fruits and vegetables and better methods of sizing, grading, and packaging these commodities. Work was continued on the evaluation of existing maturity standards for apples and grapes.

The need for the work on apple maturity was prompted by the passage of an apple maturity law, effective in September 1957. This law specified that the establishment of maturity dates should be based on known factors of quality, such as soluble solids content of the juice, pressure test, size, color, and condition of the flesh.

Earlier work (1954) of the Bureau of Fruit and Vegetable Standardization, California Department of Agriculture, on apple maturity factors indicated that some of the above factors, singly or in combination, could be used as a basis for establishing maturity dates. This was verified by the work done last year. Information derived from the 1957 data on the correlation between pressure tests and maturity was used in most apple districts for establishing maturity dates. Further work is planned to determine if certain of the other objective tests may provide a more accurate measure of maturity.

Tests were continued to determine if changes were needed in the minimum maturity standard for grapes of the Perlette, Cardinal, and Thompson Seedless varieties. Results to date indicate that there is no justification for adjusting the existing minimum soluble solids content for these varieties to correspond with temperature and humidity fluctuation.

Developing methods of certifying nursery stock (CALIF-A-2)

This project was initiated for the purpose of developing a method of certification that fruit, nut tree, and vine nursery stocks offered for sale are free of serious virus diseases, thereby assuring better nursery stock for the planting of orchards and vineyards and better marketability of the stock. Approximately 60 virus diseases are known to affect stone fruits, grapes, and pears. At least 39 of them have been reported in California. A buildup of

many of these virus diseases has occurred through the inadvertent use of infected propagating material and nursery stock. Farmers have become increasingly aware of economic losses caused by virus diseases in commercial plantings, and are demanding virus-free planting stock. Nurserymen are recognizing the farmers' needs, and are making efforts to meet the demand.

Commodities worked on during the period included cherries, almonds, apricots, peaches, nectarines, plums, prunes, grapes, and pears. The most recent tabulations, published by the California Crop and Livestock Reporting Service in June 1958, show approximately 1,390,311 acres of fruit and nut crops in California. They include 1,187,918 acres classed as bearing, and 202,393 as nonbearing. Of the nonbearing acreage, 51,302 were planted during 1957. The total bearing and nonbearing acreages of the commodities worked on during the year are: Almonds, 104,505; apricots, 41,910; cherries, 13,680; peaches, 116,228; nectarines, 11,743; plums, 28,371; prunes, 104,295; pears, 44,218; grapes, 429,817. The California Crop and Livestock Reporting Service has released the following estimated crop values for these commodities during 1957: Almonds, $18,450,000; apricots, $16,633,000; cherries, $8,806,000; peaches, $50,472,000; nectarines, $5,328,000; plums, $12,792,000; prunes, $30,855,000; pears, $26,276,000; grapes, $140,701,000.

The nursery stock needed for maintaining the acreages of these crops is produced almost entirely by nurseries in California. During the 1957-58 season, California nurserymen produced 6,497,000 yearling and June-budded stone fruit (including almonds) and pear nursery trees, and 5,600,000 grapevines. According to the 1957 census of nursery stock, 67 nurseries grew stone fruits, 37 grew pears, and 28 grew grapevines.

Activities during this reporting period were carried on in 27 counties, and involved 53 propagators.

Emphasis was placed upon the following phases of work: (1) Visual inspections of stone fruit, pear, and grapevine propagating sources, (2) visual inspections of nursery stock involving the progeny of specific propagating source trees and grapevines for the purpose of correlating disease incidence, (3) index or transmission tests in field plots and in a greenhouse as a means of supplementing visual inspections of the propagating sources and nursery stock, (4) investigation of nursery practices and devising new methods, where necessary, in order to avoid the introduction and perpetuation of virus diseases, (5) development of a repository for clean stock to be used in the project work, at the same time, development of methods of maintaining such a plot in a disease-free condition, (6) refinement of procedures for the development and continuance of registration and certification programs, and (7) increased work on mass indexing of stone fruit propagating source trees on Shiro-fugen flowering cherry for the detection of latent viruses.

Visual inspections involved 161,275 tree and grapevine examinations on approximately 148 plantings; 2,710 trees and grapevines were found unfit for propagating use.

Index or transmission tests were made from approximately 2,562 source trees and grapevines. The work directed toward the correlation of disease incidence of propagating sources and their progeny nursery stock involved the inspection of approximately 519,060 nursery trees and grapevines.

Two public hearings were held during the year for the purpose of amending the cherry and grape registration regulations so as to provide provisions for the certification of cherry and grape nursery stocks.

Activities of the project involved cooperation with the United States Department of Agriculture, the University of California Agricultural Experiment Station, Extension Service, county agricultural commissioners, the California Department of Agriculture's Nursery Service, nurserymen, growers, and horticulturists, including fruit tree and grapevine breeders.

Improving distribution of fresh and processed fruits, vegetables, honey, and turkeys (CALIF-B-1)

The California Department of Agriculture under this project furnishes marketing assistance to agricultural industries operating self-help marketing programs under the authority of the California marketing statutes. The aims of this assistance are the stabilizing and expanding of markets through the improving of products with respect to kind of pack, quality of pack, and containers; the surmounting of obstacles to utilization, distribution, and sales; and the increasing of the effectiveness of promotional activities.

Assistance in the form of marketing surveys was furnished during 1957-58 to California growers, handlers, and processors of strawberries, processed boysenberries, fresh peaches, and fresh plums. These marketing surveys included the steps of analyzing the marketing problem, obtaining information bearing on the problem, and formulating specific recommendations for consideration by the marketing order advisory board for the particular commodity and by individual members of the industry. In each step full use was made of work already done by private and Government agencies such as trade associations, the Agricultural Extension Service and Agricultural Experiment Station of the University of California, the Bureau of Market News and Bureau of Agricultural Statistics of the California Department of Agriculture, the Agricultural Marketing Service and the Western Utilization Research Laboratory of the U. S. Department of Agriculture. Essential information not already available was obtained through firsthand observations of marketing practices, and through personal interviews with representative commercial users and distributors in the markets with which the given industry was concerned.

The findings and recommendations of marketing surveys were furnished to industries in oral reports to advisory boards, in correspondence and discussion with board managers and advertising agencies serving the respective advisory boards, and in printed reports distributed to all members of the industry and to others on request. Requests for reports of past and current

surveys were received from organizations and individuals in California, in other States, and in foreign countries.

Assistance was furnished to the peach, pear, plum, prune, honey, and turkey industries in the form of problem analysis and basic information. Also information was furnished to an airline company requesting information that might be helpful to it in developing plans for better serving California agricultural industries. Some of the highlights of the project activities and accomplishments are:

Strawberries.--The strawberry industry was given assistance through a marketing survey which uncovered obstacles to distribution and sales and pointed up opportunities for expanding the market. Action has already been taken on a recommendation that the retail frozen strawberry container carry more adequate directions for opening and on the recommendation that the program of in-store promotion should be altered respecting kinds of signs and their layout. The advisory board is considering other recommendations developed by this survey.

Boysenberries.--Assistance was furnished to California growers and processors of boysenberries in the form of marketing survey information on their progress in expanding out-of-State markets. Although the out-of-State sales increase of the past 2 years has been in large part due to a temporary shortage of blueberries, the promotional program for boysenberries has proved helpful. A recommendation that restaurant and cafeteria desserts be promoted more intensively and other recommendations are being acted upon by the board.

Fresh peaches and fresh plums.--Major objectives were completed on a project of marketing assistance to the fresh peach and fresh plum industries. Undertaken on the joint request of the advisory boards for the two industries in May 1957, the project was designed to strengthen the promotional program for the two products by supplying basic marketing facts and defining promotional objectives. Findings and recommendations applicable to both products were presented orally in a series of three meetings and those for peaches were presented in detailed printed form in a publication entitled "Increasing the Sale of Fresh Peaches in California." The publication was distributed among 2,700 growers, handlers, and allied interests during July 1958. Results thus far have been manifested in the attitude of board members toward promotion, in the more decisive manner with which promotional actions are being taken, and in expressions of desire for a continuation of assistance in promotional planning.

Canning Bartlett pears.--Additional assistance was provided the Program Committee of the Marketing Order for Canning Bartlett Pears. In connection with a first-hand field investigation of promotional operations made by the Program Committee itself, the California department was consulted regarding markets and trade levels that should be contacted. Also, members delegated by the committee to make the field investigation were informed about proper interviewing methods and how to use them. Partly as a result of its

investigation, the Program Committee renewed its request for a marketing survey to help answer questions concerning selection of markets and media for promotional purposes. Preliminary work on this request has entailed the development of regional sales performance indexes which thus far have disclosed market potentials for canned pears in the New England, Southeastern, and Southwestern regions.

Turkeys.--The California turkey industry was assisted in formulating plans for research on ways to expand consumption, and a manufacturer of transparent packaging material serving the turkey industry was assisted in analyzing the problem of marketing turkey parts and in formulating a research project for solving the problem.

Honey.--The United States honey industry was assisted through advising representatives of the U. S. Department of Agriculture and the University of California with respect to a projected honey marketing study.

Promotional fundamentals.--Work was started in August on the preparation of basic information on advertising fundamentals for use by advisory boards in conducting industry promotional programs. The need for this information, as discussed in the last progress report, became increasingly apparent during the current year. Information will be drawn from the department's experience with sales promotional campaigns under marketing order programs and from reputable textual and agency sources. Objectives of the project are to improve the effectiveness of industry advertising and to provide foundation for greater understanding and use of trade surveys and other marketing research information. The project is expected to require 2 to 3 months for completion.

Providing new basic information (tree fruits, nuts, and bush berries) (CALIF-D-1, D-2, D-3, D-4)

Fruit and nut acreage surveys.--The objective of this work is to develop and to keep current more complete and reliable basic data covering the bearing and nonbearing acreage of tree fruits, tree nuts, and vines, by kinds, by major varieties, by age groups, and by counties in this State. Data acquired in conducting these surveys are summarized, published, and disseminated each year in bulletin form. Extensive use is made of these data by growers, cooperatives, dealers, shippers, processors, financial and transportation agencies, Federal and State marketing order advisory boards, Government officials, and others. The data also are basic to the development of seasonal forecasts and estimates for these crops as made by the Federal State Crop Reporting Service and to the objective sampling projects described in the latter part of this report.

Surveys of new plantings and removals were made in all counties of the State. The results of these surveys provided data for adjusting the previously recorded standing acreages to a current basis. The field work was done in cooperation with the county agricultural commissioners who provided additional field men, clerks, transportation, and office space to the degree that their

respective resources permitted. The field work and the keeping of records was performed under the direct supervision of the Bureau of Agricultural Statistics of the California department.

Bush berry acreage and production surveys.--The annual farm value of commercial bush berry crops in the State exceeds $3 million. Moreover, these crops are highly perishable, costly to produce, and their prices are sensitive to imbalance between supply and demand. Thus, growers and processors have very great need for current information on the seasonal supplies of these crops. The activities under this project are intended to provide this needed information. This phase of the acreage survey work embraces the determination of the acreage of commercial bush berries in the State, broken down into blackberries, boysenberries, youngberries, loganberries, and raspberries, and also the production, utilization, and total value of these commercial crops. Data are obtained and published for the five principal types of bush berries.

The procedure for gathering the enumerated acreage and basic production data was changed beginning with the 1958 survey from the plan followed in previous surveys. The mailed inquiry was used to obtain both acreage for harvest during the coming year, and the previous year's harvested acreage and production. One enumerator was then employed for about 2½ weeks in order to contact all nonrespondents and locate new growers. While acreage for harvest for the coming season was enumerated, the previous season's production was estimated based on the indicated yield reported in the mailed inquiry. Since the mailed return was large (80 percent response for 1957 survey) the additional accuracy to be gained by enumerating production of nonrespondents was believed to be insignificant.

Development of objective methods of estimating production (cling peaches, Bartlett pears, grapes and walnuts).--Reliable and accurate estimates of production are needed by many agricultural commodity groups in California to make intelligent marketing decisions and achieve effective marketing of the various crops, including tree fruit, nuts, and grapes. The combined annual farm value of the four crops in the State on which the work is being currently conducted amounts to nearly $230 million. The results of the work are of direct value to more than 65,000 producers of these commodities in the State, to several marketing order boards, to several hundred dealers, shippers, and processors, and as well to Federal and State agencies engaged in administering marketing programs related to these crops.

It is impractical to estimate a specific value of the results of the work. They have proven useful currently, but the principal benefits will be realized in future years as the techniques used are perfected. Marketing analysts have estimated that a change of 1,000,000 cases (equivalent to about 20,000 tons of fresh fruit) in the commercial domestic movement of California canned cling peaches, considered by itself, has been on the average accompanied by a change in the opposite direction of about 16 cents a case in the f.o.b. price of canned cling peaches. For Pacific Coast canned pears, the comparable price change is about 64 cents per case. Obviously, wrong

forecasts can lead to either overpricing or underpricing of processing crops. Accurate forecasts can aid in stabilizing prices where volume controls are available, and both producers and consumers will benefit materially from such stability.

The purposes of this work are: (1) To determine if objective sampling methods can provide a practicable basis for making dependable forecasts and estimates of deciduous tree fruit, nut, and grape crops; (2) to design, develop, and test methodology; (3) at the same time, to provide forecasts developed from the project, for use by marketing order advisory boards and industry members. The procedures involved may be briefly described as follows:

Sample orchards or vineyards for each commodity are selected from a record of all growers in the State, using statistical techniques which insure proportional representation of producing areas, varieties, age groups, sizes of producing units, etc. Next, the difficult and exacting field sampling procedures are carried out to obtain the sample data required. Sample data consist of counts of immature fruit on preselected trees and vines and size measurements on a subsample of the fruits or nuts counted.

The estimating procedure which has shown the most promise to date has been a ratio type of estimate in which the product of the changes in counts, size, and bearing acreage from a base year to the current year is multiplied by the production in the base year. This product is an indication of production for the current year. However, it is necessary to make statistical adjustments for changes in counts and sizes between the survey date and harvest.

It has been assumed that the count ratios of fruit set are about the same as before harvest for all fruits and walnuts. Therefore, the preharvest count ratios are used in the estimating equation without further adjustment. However, the subject of fruit drop and the incidence of culls require further study. Originally counts of fruit were determined by stripping all of the immature fruit from an entire tree before counting. Payment for the fruit destroyed made this procedure expensive. To eliminate this expense and reduce costs of counting fruit, procedures were developed in 1956 and continued in 1957 and 1958 for counting the fruit on a part of the tree without stripping. For the second year, the experimental forecasts of production for Bartlett pears and grapes were based on on-tree (and on-vine) counts. Experimental work is being done to determine the most efficient basic sampling frame, such as part of tree or vine, to be counted, as well as the number and orchard distribution of these trees or vines.

Projecting size ratios from early season to harvest is a little more complex than count ratios, since growth may vary from year to year in rate and duration. For cling peaches, the size ratios at reference date (when the pit begins to harden) have proven quite reliable in predicting directly the size ratios at harvest in most years. However, unusual growth patterns in abnormal years indicate the need for additional surveys to obtain data on which to adjust for size in forecasts. The relationship in grapes is still

under study, although it has been fairly well established that bunch lengths have reached their maximum by late June or early July.

For Bartlett pears, the length of time to maturity is so variable that the June size ratios do not predict directly the harvest size ratios. Therefore, it has been necessary to project the actual diameter at harvest by estimating the daily increment in diameter and the number of days to harvest. In the Bartlett pear survey this year, three size-increment surveys were made in all areas of production plus a preharvest survey in late areas. These surveys were made primarily to establish better data on the rate of growth of pears and to see how well a projection of early season sizes would estimate harvest sizes. Preliminary calculations for the 1958 season, which show that growth rates did increase, may indicate the need for a multistage sampling scheme to provide new forecasts periodically during the season.

Limited experience indicates walnut size does not change after a certain date. The walnut survey is being conducted in approximately the same manner as the other surveys, with one major exception. Because of the nature of walnut trees, samplers were instructed to select parts of trees (limbs) for counting that could be reached from a 12-foot orchard ladder. Also, to test for possible bias in set and size counts, from every 10th tree sampled a limb was selected at random from any position on the tree and nuts were counted and measured. Set and sizes of nuts on the first limb selected and the second limb chosen at random will be compared.

COLORADO

Improving marketing practices (COLO-A-1)

Potatoes.--The Colorado Department of Agriculture, in cooperation with the Colorado Agricultural Experiment Station, continued work to reduce "thumb nail" checking and loss of color in Red McClure potatoes grown in the San Luis Valley area. These conditions detract from the appearance of potatoes shipped from the area and adversely affect sales.

The department also assisted the committees administering the State marketing orders for the San Luis Valley and northern Colorado areas in conducting market surveys to determine what improvements were needed in grading, sizing, handling, and packaging to make potatoes from these areas more acceptable in the markets surveyed. Information obtained in these surveys was used in planning the 1958 marketing programs under these orders. The northern Colorado area, with the aid of department specialists, conducted a promotion campaign during the 1958 season. Specialists arranged a meeting with chainstore representatives and other large-volume buyers of Colorado potatoes prior to the marketing season for early varieties of potatoes from the Gilcrest area, to explain the promotion program and to solicit their cooperation. Specialists also contacted about 1,000 retail stores in Colorado and adjoining States with reference to the program, and showed them how to

prepare effective displays utilizing point-of-sale material paid for by the Potato Board of Control. Chainstores and other retailers cooperated by featuring early Colorado potatoes in their newspaper advertising. This promotion program is reported to have improved the sale of potatoes from the area.

Peaches.--During the 1957 peach marketing season, specialists of the Colorado Department of Agriculture, in cooperation with the Mesa County Peach Control Board, contacted potential buyers in the markets for Colorado peaches, furnished them with information about varieties, quality, and supplies, and a list of handlers from whom Colorado peaches could be purchased. On these visits to the markets, specialists also called on retailers and obtained information regarding preferences for size, maturity, and packaging, and encouraged them to feature Colorado peaches. A report based on these market surveys was made available to the producers and handlers of Colorado peaches.

During the 1958 marketing season, the Colorado department assembled and reported information on peach shipments to assist shippers in routing their shipments to the most favorable markets.

Wheat.--Specialists participated in 66 meetings throughout the State to explain the provisions of a proposed State Marketing Order for wheat. This marketing order was approved and became effective May 5, 1958. The order authorizes programs designed to improve the marketing of wheat and assessments to finance those programs. Specialists of the Colorado department are assisting the Committee established under this order in planning its marketing improvement program.

Other products.--Information was developed and several meetings were held in connection with proposed State marketing orders for lettuce, beef, beans, apples, and wool.

Poultry and eggs.--A survey was made to determine the effectiveness of the poultry and egg market news reports for the Denver market. The poultry report was discontinued since the survey indicated that the volume of poultry sold in the Denver market was not sufficient to provide reliable price information. The Colorado department also recommended after the survey that the basis for quoting egg prices should be changed from "Price Paid Delivered Denver For Eggs Candled and Graded in Denver, Cases Included" to "Prices Paid by Retailers."

Several meetings were held with egg and turkey producers to discuss the organization of cooperative marketing agencies.

FLORIDA

Improving quality and expanding outlets (eggs) (FLA-A-1)

Work under this project was initiated during the year. Several committees, composed of representatives from the poultry industry, the Florida Department

of Agriculture, University of Florida, State Board of Health, and State Board of Education, were set up to plan the program and conduct specific phases of it. One of these committees developed material on the value of eggs in the diet and methods of cooking, and sponsored cooking demonstrations; another prepared publicity material for use by various media to encourage increased egg consumption; and another planned and conducted activities designed to improve quality, grading, and methods of packing, and to foster the use of official grades in buying and selling eggs.

The home demonstration agent in one county cooperated in the program by conducting a series of egg-cooking schools in which the participants were 4-H Club girls. The winning team in the contest appeared on one of the Miami TV stations and demonstrated methods of cooking eggs.

In collaboration with the Agricultural Extension Service, three TV films were prepared to portray proper egg grading and handling methods; demonstrate to consumers the factors responsible for variations in egg quality, how to interpret grade designations, and how to determine best buys; and demonstrate proper methods of cooking eggs and the varied ways of using eggs in meal planning.

The material prepared under this project received wide publicity over the State. For example, a feature story prepared in color on the Florida egg industry was carried by 21 newspapers having a circulation of about 500,000. Radio and TV stations in several large cities used the material in their programs. During March Egg Month, for example, the TV stations in Jacksonville, Tampa, and Orlando carried four live programs designed to promote increased egg consumption.

One means of improving producer's outlets for eggs was a clearinghouse arrangement through which egg dealers in the important cities of the State were supplied with current information regarding local supply situations.

Improving marketing efficiency (eggs) (FLA-C-1)

This project was initiated during the year. Work was completed on a survey of the marketing practices of cooperative egg marketing agencies. Results of the survey have been presented in talks before industry groups but formal publication has not yet been made.

Providing new basic information (tomatoes) (FLA-D-1)

Under this project, information relating to the rate of planting and condition of the Florida tomato crop was assembled and reported each week of the 1957-58 tomato production and marketing season. These reports furnished the tomato industry with crop data on a continuous inventory basis, since plantings were adjusted according to acreage lost and not replanted and acreage lost but replanted. The reports were especially valuable last season to growers, marketing agencies, and the Florida Tomato Committee, which operates the tomato

marketing agreement and order, because of the large losses in acreage due to freezing weather and the distortion which occurred in the normal marketing pattern. The reports made it possible for the industry to anticipate periods of abnormally heavy marketings and to develop regulatory and merchandising programs to alleviate what otherwise would have been very difficult marketing situations.

One feature of the reports was a comparison of cumulative plantings during the 1957-58 season with those of the preceding season. The usefulness of the reports will improve as these historical data accumulate and provide a benchmark for measuring deviations from normal in the current season's prospective marketing pattern.

Personnel employed on the project are making a final check on acreage harvested, yields, and prices, thus improving the accuracy and value of these statistics.

Improving production forecasts (citrus) (FLA-D-2)

This project, which was undertaken jointly by the Florida Department of Agriculture, Florida Agricultural Experiment Station, Citrus Administrative Committee, and the Agricultural Marketing Service, U. S. Department of Agriculture, has as its purpose the development and evaluation of objective procedures for estimating the Florida citrus crop. It became active in April 1956. Various objective methods of measurement are being tested in this work, including the "frame count" which furnishes an estimate of the number of fruits per unit of bearing surface, the "limb count" which provides an estimate of the number of fruits per tree, the "growth survey" from which an indication of fruit sizes at harvest can be derived, and the "droppage survey" which provides data for adjusting the estimates based on the frame and limb count. Initial surveys for the season are conducted between August 1 and September 15. The growth measurement and droppage surveys are continued at monthly intervals during the growing and marketing season.

The value of objective measurements in estimating the Florida citrus crop was demonstrated last season following the series of freezes which caused extensive damage to fruit and trees. With a scientifically selected sample of groves, it was possible to come up with a very accurate estimate of the marketable quantity of fruit remaining after the freezes and to arrive at preliminary estimates of the damage to trees by severity classifications. The first forecast after the freeze, made January 10, 1958, gave an estimate of 115 million boxes for all citrus, compared to a final out-turn of 116.2 million boxes. This report helped to prevent wild price fluctuations and to restore orderly marketing conditions for citrus.

GEORGIA

Improving quality and expanding market outlets for livestock (GA-A-1)

Work under this project was initiated during the past year. Examples of specific project activities follow:

Hogs.--The livestock marketing specialist of the Georgia Department of Agriculture conducted a series of live and carcass grading demonstrations at livestock shows and other events to acquaint producers with grading procedures and the importance of producing and marketing meat-type hogs. The specialist also conducted a survey at one auction market to determine the practicability of establishing a grade-price buying system. The survey results indicated that this method of buying would be successful on this market, and it was adopted. This pilot operation has stimulated the interest of other livestock auctions in buying hogs on the basis of live grades.

Feeder calves.--Specialists of the Georgia department and the Extension Service cooperated in conducting three feeder calf sales. When calves at these sales were sorted and grouped according to grade, weight, and color, sale prices were increased about 2 cents per pound.

Lambs and wool.--The livestock specialist worked with the Extension Service in staging demonstrations of grading at 10 spring lamb pools over the State. He also assisted in putting on the first purebred ram sale held in Georgia. Wool-grading demonstrations were given at the 6 wool pools held during the year, at which about 160,000 pounds of wool were handled. These demonstrations were given to show producers how to sort and sack wool for best marketing results.

Livestock conservation.--The specialist prepared and disseminated several articles on preparation of animals for market, prevention of bruises in handling, and proper procedures in marketing.

Improving the quality of cornmeal (GA-A-2)

Progress is being made under this project in improving the quality of cornmeal produced in Georgia. This fact is revealed by a comparison of recent reports of the State chemist on cornmeal quality with those prior to initiation of this program. Every miller who has improved the quality of his cornmeal as a result of this work has been able to increase his volume of sales. Requests for assistance have reached the point where additional personnel is needed to meet the demand. The following outline gives a detailed picture of the sequence of the steps which the marketing specialists followed in assisting one cornmeal miller in improving efficiency and quality of product and how these improvements led to an expansion of his market:

(1) Better grain storage and handling facilities were installed. These proved so satisfactory to the miller that he wanted to continue improving.

(2) Better cleaning equipment, consisting of a receiving separator and scourer, was installed.

(3) A duct was installed to carry all refuse from the cleaners to collectors on the outside of the building.

(4) A more efficient airlift for conveying the finished product was designed and installed.

(5) After the first four improvements were made, business increased to the point where additional grain storage was necessary, and a 4,400-bushel farm storage bin was installed.

(6) Bin thermometers and an aeration system were installed. After receiving many compliments on the cornmeal, the miller wanted to make additional improvements.

(7) A modern gyro-whip sifter was installed.

(8) A self-rising mixer and a weighing hopper were installed.

(9) Because more storage was required after the eight installations described, another 4,400-bushel farm bin was installed. Additional ducts were linked to the miller's present aeration system for the second bin.

Improving quality and expanding market outlets for fruits and vegetables (GA-A-3)

Cooperative efforts of the Georgia Department of Agriculture, the Georgia Department of Commerce, and the Georgia Chamber of Commerce were continued to promote wider distribution and increased sales of fruits, vegetables, and nuts grown in Georgia. A "buyer's guide," depicting on a map of the State the locations of assembly markets and the items available at each market, together with quantities, varieties, and marketing periods, was prepared and distributed to buyers in the principal markets for Georgia produce. Marketing specialists of the Georgia Department of Agriculture also visited the principal eastern markets, where they informed buyers of supply prospects and assisted them in locating the qualities and quantities of each item desired.

Other marketing specialists were assigned to the assembly markets in Georgia, where they assisted producers and shippers in improving the quality of the products marketed. Other activities to improve quality included field demonstrations of proper harvesting and grading methods.

Through these efforts producers of fruits and vegetables in Georgia were able to market practically all their production of marketable quality, despite unusually large supplies of competing items in other areas.

Assistance was provided two grower organizations marketing peaches and apples in maintaining high standards of quality for the fruit which they packed. The assistance given the peach marketing organization enabled it to sell practically all of the peaches which it packed on an f.o.b. shipping point basis, whereas other shippers who did not adhere to strict quality standard were forced to sell most of their packs on a consignment basis, at substantially lower net prices. By centralizing their packing operations and improving the quality and uniformity of apples packed, the growers selling through the apple marketing organization realized about $1 more per bushel than they would have if they had individually packed and sold the apples.

The Georgia Department of Agriculture and the Extension Service again cooperated in staging the Harvest Curb Market in Atlanta where the various farm products produced in Georgia were sold directly to consumers. This 1-day event is for the purpose of acquainting consumers in the Atlanta area with the variety of products grown in the State.

Improving quality and expanding outlets for eggs (GA-A-4)

Egg production in Georgia has increased so that at some seasons of the year supplies exceed the State's requirements. This development has necessitated a shift in emphasis in the activities conducted under this project. The program of training producers and packers in proper methods of sizing, candling, storing, and handling was continued on about the same level of intensity as in the preceding year. Efforts to expand outlets, however, were stepped up. Promotional work in Georgia with reference to eggs is under the auspices of the Georgia Egg Association. Specialists of the Georgia Department of Agriculture assisted this association in all phases of its promotional program. One feature of this program was a series of TV shows designed to encourage greater egg consumption.

Improving seed quality (GA-A-5)

Unfavorable weather during the 1957 peanut harvest created a serious problem for peanut shellers who process peanuts for sale as seed. Since this situation threatened to cause a severe shortage of seed peanuts, the Georgia Department of Agriculture, in cooperation with the Coastal Plains Experiment Station and the Extension Service, conducted a survey to assist shellers in determining the quantities of the peanuts they held which were of seed quality. Assistance also was given these shellers in reducing mechanical injury in the shelling process and in adopting proper methods of fungicidal treatment so as to increase the proportion of their stocks which were of acceptable seed quality.

Seed processors in Georgia also were assisted in improving the quality of locally grown rye seed. Rye acreage in Georgia has increased sharply in recent years. To take advantage of the resulting increased demand for seed rye, seed processors need to improve processing and storage practices. Seed specialists have determined that the mechanical drying of rye seed immediately after harvest materially improves the percentage of germination. Specialists plan to encourage seed processors to use artificial drying methods next season where low germination is expected.

Providing new basic data and marketing information (GA-D-1 and GA-D-2)

Three publications--"Georgia Agriculture," "Poultry Facts," and "The Egg and Georgia"--were issued during the year. Preliminary work also was done in preparing a publication on the marketing of dairy products in Georgia. The weekly broiler releases were continued, providing information on broiler chick placements, eggs set, prices for hatching eggs, broiler chicks, and

broilers. Demand for the publication "Poultry Facts" was such that a second printing was necessary.

HAWAII

Developing new and revised standards for grades of processed fruits and vegetables (HI-A-1)

The Hawaii Board of Agriculture and Forestry continued work to develop grades and standards and methods of measuring various quality factors to facilitate the marketing of processed fruits and vegetables. The products tested and considered for standards during the year were purees, nectar bases, nectars, and nectar blends of guava, passion fruits, papayas, and other tropical fruits.

These products were examined for various characteristics and constituents, including determination of Brix, titratable acid as citric acid, pulp by centrifuging at specific speeds and time, viscosity by the viscometer using a 5/64-inch metal precision tube, defects as determined organoleptically, color as determined by the Hunter-Gardner Color Difference Meter and organoleptically, and ascorbic acid by titration with a solution of 2.6 dichloroindophenol sodium salt.

The results of the examinations indicate that additional work in quality control is needed in the five participating plants to obtain the uniformity in the pack of processed fruits which is required in the development of an effective marketing program. The Processed Food Laboratory at the University of Hawaii, the Processed Foods Standardization and Inspection Branch, Agricultural Marketing Service, Washington, D.C., and the Department of Agriculture of Puerto Rico cooperated in this program.

ILLINOIS

Improving quality methods of handling farm products and expanding market outlets (ILL-A-1 and ILL-B-1)

Eggs.--In preparation for more stringent regulation of egg marketing to take effect July 1, 1959, under the amended Illinois Egg Law, the Illinois Department of Agriculture intensified its program of assistance to the egg industry in training employees in egg grading methods and in explaining to egg dealers and retailers the changes in egg marketing procedures required under the amended law. Three grading clinics were held during the year to train employees of egg dealers and retailers in understanding the factors of egg quality and how to grade eggs in accordance with the standards adopted under the egg law.

Information about the new requirements of the egg law was disseminated to dealers, retailers and consumers through a series of 20 meetings attended by almost 1,200 persons and through the press, radio, and TV.

Some 75,000 people viewed the egg quality exhibit staged at the Illinois State Fair. Actual demonstrations of egg quality differences were presented at the exhibit booth throughout the 8 days of the fair. Similar exhibits and demonstrations were made before industry convention groups and high school classes and at expositions.

This work was conducted in cooperation with the Illinois Poultry Council, University of Illinois, Southern Illinois University, and the Poultry Division, Agricultural Marketing Service.

Fruits and vegetables.--Efforts were continued to expand outlets for such products as apples, peaches, strawberries, cucumbers, peppers, and tomatoes by assisting producers, producer organizations, and packers in achieving greater standardization of grade and pack and in adopting better selling practices and more suitable packages, and by disseminating information on available supplies. The cooperative program with the Illinois Fruit Council, under which buyers were furnished with information regarding the quantities, varieties, qualities, and locations of Illinois peaches and apples, was continued. These informational bulletins were distributed to about 5,500 buyers in Illinois and nearby States.

Expanding outlets for dairy products (ILL-B-2)

Activities under this project, which are being carried on in cooperation with the Illinois chapter of the American Dairy Association, again were concentrated on improving the effectiveness of wholesale and retail route salesmen in promoting the sale of dairy products, assisting distributors and retail food stores in dairy product promotional programs, staging special dairy festivals and exhibits, and working with schools and institutions in developing means of increasing the use of dairy products.

In the work with route salesmen the marketing specialist assigned to this project accompanied the salesmen on their routes to observe selling methods and to point out what approaches and techniques they might use to increase sales. The specialist used the information obtained in these route surveys as a basis for discussions with plant management and sales supervisors concerning the need for improved sales performance by route salesmen and ways this could be accomplished.

A pilot plan was tried out in the school system of one of the cities in the State to increase the participation of schools and school children in the special milk program. School officials and school children participated directly in the plan, which included a survey of milk drinking and eating habits of grade-school children, publicity of the results through the press, radio and television, a 3-month extra-curricular nutritional education program, and a followup survey to measure results. The results are being analyzed and will be published this coming year. The participation of school children in the plan was encouraged through nutrition experiments which they planned and conducted.

Encouraged by results obtained the preceding year with a few dairy plants in promoting cottage cheese, the specialist, in cooperation with the Department of Food Technology, University of Illinois, the American Dairy Association of Illinois, home economics teachers, and home demonstration agents, set up cottage cheese promotion campaigns in 5 of the important counties in the State. The first phase of each of the campaigns was to obtain the interest and enlist the support of cottage cheese processors through meetings with them at which plans for the promotion were developed and problems of producing high quality cottage cheese and merchandising it were discussed. Each processor brought samples of his product to the meeting for quality evaluation by a member of the Department of Food Technology. Display and point-of-sale material for the promotion were supplied by the American Dairy Association of Illinois, the Pacific Coast Council Pear Service and the California Cling Peach Advisory Board. Merchandising representatives of these agencies appeared before the meetings to demonstrate the use of the material and how to tie in sales of canned pears and peaches with cottage cheese for maximum total sales effects.

The 12 processors cooperating in the promotion reported an average increase of 20 percent in cottage cheese sales during Lent.

Assistance was given a number of counties in the State in developing countywide dairy promotions during June Dairy Month. In one county a dairy smorgasbord event was used as a means of calling attention to the many ways milk and dairy products can be used in planning healthful meals.

Improving facilities and methods of packing and handling vegetables (ILL-C-1)

Earlier work under this project resulted in the formation of three marketing agencies and the building and equipping of facilities to assemble, grade, pack, and sell various vegetables grown in southern Illinois. These agencies were successful from the start in providing their members with efficient, low-cost services and in obtaining favorable sales outlets for their products. Continued assistance was given these agencies in matters relating to the replacement of equipment, expansion of facilities, development of more satisfactory grading and packing methods, and selection of new and improved packages.

Providing new basic data (ILL-D-1)

Under this project Illinois farmers are receiving new data which they need in making production and marketing decisions. The types of data being provided are discussed under the following commodity headings:

Field crops.--Demand is increasing for a varietal breakdown of the acreage of various crops planted or seeded each year. Different varieties of a crop have different physical or chemical properties which affect suitability for certain uses and which influence price. Data on the percentage of acreage planted or seeded to different varieties in each of the State's crop reporting districts were issued during the year for such crops as soybeans,

wheat, and oats. Other important information requested and being provided for field crops concerns prospective production and supplies by districts, and weekly data on the development of growing crops and progress of the harvest.

Livestock and poultry.--The quarterly surveys on sow farrowings, calf births, and during the lambing season lamb births, were continued. The data from these surveys were utilized in making monthly estimates of prospective marketings of these classes of livestock. Reports were issued showing estimates of intended marketings of hogs and cattle by classes and sex. Progress was made in placing this information and number of pigs, calves, and lambs born on a crop reporting district basis.

Fruit.--The annual survey of apple and peach tree numbers was made, and the results were published to assist fruit growers and others in keeping abreast of trends in tree plantings and removals. Further refinement of the survey, under which new plantings will be shown on a varietal basis, is planned. This information is of special importance because of the factors of market preference and season of marketing.

Timber.--The semiannual timber products report was continued. Indications are that this service has helped to reduce the wide disparities which formerly existed in values of timber for different uses and in prices for the same product in various areas of the State. Assistance was given to several other States interested in developing a report of this kind in designing questionnaires and determining survey methods.

INDIANA

Improving the quality of milk and dairy products (IND-A-1)

Under this project, Purdue University is assisting 69 milk plants and 26 butter plants in standardizing quality tests for milk and cream, in improving the quality of milk and cream received from producers, and in improving the quality of manufactured dairy products. These plants account for about 65 percent of the milk and 95 percent of the sour cream sold from Indiana farms. The program also includes assistance to operators of cream buying stations in improving facilities, equipment, testing procedures, and handling methods.

Field surveys were made during the year of participating dairy plants and cream buying stations to evaluate reports concerning each plant's quality improvement program and to score each cream buying station as the basis for establishing performance ratings. Sanitation methods, grading procedures, and physical facilities were used as a basis for the scoring. The average score of the 99 cream buying stations last year was 92, compared with an average score of 88 four years ago. This higher score was achieved despite the imposition of stricter performance standards during the period between the two surveys.

Quality improvement clinics and grading schools were conducted periodically during the year as a part of the program. At the clinics samples of milk and dairy products submitted by participating plants were analyzed and graded for quality. Discussion of the results and methods of correcting for defects in quality followed.

Two series of grading schools were held during the year. At the 11 cream grading schools held over the State, about 225 cream station operators, route drivers, and cream receiving personnel received instruction in cream grading. Over 600 persons attended the 13 milk grader's schools where flavor problems and the legal aspects of bulk tank delivery were discussed. The State Board of Health cooperated in conducting these schools. Dairy plant operators have requested that these schools be made a regular feature of the quality improvement program.

A survey was conducted during the year among cream producers to obtain information with respect to cream handling and marketing practices. This information served as the basis for strengthening quality improvement work with producers. Indications are that the program is bringing about gradual but significant improvement in the quality of Indiana's dairy products. The percentage of butter scoring 92 or better increased from about 27 percent a year ago to nearly 31 percent last year. Further reduction was made last year in the volume of milk rejected as under-grade. In northern Indiana last year over 80 percent of the cream being marketed was of premium quality, and commanded a premium of 2 cents per pound over cream of the quality normally produced before the program was started.

Improving marketing practices and expanding outlets for Indiana farm products (IND-B-1)

The objectives of this project are to improve the distribution system and expand outlets for Indiana farm products through improvement of quality, better marketing information, promotional activities, and improvement of business management practices.

General guidance and direction of the project is provided by the Indiana Farmer-Retailer Committee, composed of representatives from the various types of marketing and producer organizations in the State. Specialists at Purdue University are in active charge of the project.

A variety of activities were conducted during the year in furtherance of project objectives. Efforts were continued to launch the Indiana Seal of Quality program. This program was authorized by the last session of the General Assembly and is of a voluntary nature. To participate, however, marketing agencies must comply with inspection and minimum quality requirements. Provision is made under the program for informational campaigns to acquaint producers, handlers, and consumers with individual commodity promotions under the Seal of Quality. The watermelon industry in Indiana

planned to operate under the Seal of Quality program last year but extremely low quality of the product resulting from excessive rains made it impractical to do so.

A sample of produce buyers was surveyed during the year to obtain suggestions regarding improvements which need to be made in the quality, grading, packaging, and handling of Indiana fruits and vegetables, poultry, and eggs to improve trade and consumer acceptance. Results of the survey are being prepared for publication.

Under another project activity, marketing personnel of meatpacking plants, livestock markets, grain elevators, and dairy and poultry processing plants were brought together in a meeting at which marketing problems were discussed and analyzed and research results and other information relating to marketing were presented. This meeting was attended by about 480 workers in marketing, of which nearly three-fourths were management personnel. A similar meeting was held for county agents in one area of the State.

Improving product quality and the efficiency of vegetable canning plants (IND-C-1)

One of the principal activities under this project is the training of canning plant employees in the techniques of quality control and plant sanitation. The peak enrollment at the 3-week school was about 65 persons. The technicians trained at this school were assigned to individual plants during the canning season where they assisted canners in establishing or improving quality control systems and in identifying and correcting conditions responsible for quality defects, and maintained a constant check on the sanitation of the plant and processing equipment. These plant technicians scored each cooperating plant in accordance with the Indiana Canner's Sanitary Code. Those plants complying with a minimum of 75 percent of the code items were authorized to display a sign to the effect that the plant was operating under continuous sanitation and quality control supervision.

The work of these plant technicians was checked regularly by the supervising technologist at Purdue University who was in charge of the project. This supervisor also assisted canners in finding solutions to special problems. For example, he assisted one plant last season in reducing color loss in tomato juice which was responsible for lowering the quality of the juice packed by one full grade. This was accomplished by eliminating one operation in processing the juice--that of sterilizing and holding the juice in batch salting tanks. Results of this work have been submitted to the Food Technology Journal for publication. At another plant the supervisor continued work to improve control of flies and odors. By sealing the waste disposal lagoon with a polyethylene film, the supervisor was able to eliminate all flies from this source. This work was reported in the Journal of Economic Entomology, June 1958.

The "Canners' News Letter" was continued as a medium for keeping canners informed of new developments in quality control, sanitation, and marketing of

canned foods; also to encourage them to make advance preparations for the canning season in matters relating to quality control and sanitation.

About 90 canners and canning plant employees participated in a 3-day technology and marketing conference held at Purdue University this past year. An attempt was made in this conference to train participants in some of the more highly technical aspects of quality improvement and marketing of canned vegetables.

Providing marketing information and improving marketing efficiency (IND-D-1)

The analysis and dissemination of marketing information to assist producers and marketing agencies in making both short-term and long-term marketing decisions is one of the major activities under this project. Approximately 21,000 Indiana farmers and firms engaged in marketing agricultural products receive the monthly publication, "Economic and Marketing Information for Indiana Farmers," in which this marketing information is presented. News releases prepared from the articles and other material submitted for this monthly publication were furnished the press service and radio and TV stations. This procedure improved the timeliness of the information, which was of special value to producers faced with immediate production and marketing decisions. An additional monthly publication, "Indiana Farm Prices," supplements the other monthly publication for those in need of detailed production and price statistics.

Under another phase of the project, information on the availability of fruits and vegetables is assembled weekly during the marketing season and furnished buyers over a wide area. Consumers were kept informed of the supply situation for the various produce items through weekly releases prepared by specialists on the Purdue University staff and disseminated by newspapers and radio stations.

Information on improved methods of preparing products for market was presented to growers and marketing agencies at meetings and through individual contacts. Assistance was given these groups with problems concerning such matters as prepackaging apples and peaches in specialty packs, hydrocooling and prepacking sweet corn, and controlled storage of fruit.

A special pricing informational service was provided watermelon growers and shippers during the marketing season. This service helped stabilize prices under extremely unfavorable growing and marketing conditions.

A program of assisting food retailers in increasing the efficiency of their operations, initiated by the Agricultural Economics Department in 1955, was expanded during the year. About 100 stores were surveyed during the year and information obtained concerning financial operations and business procedures. This information was analyzed by the Agricultural Economics Department and the results used to point out to each individual retailer

his relative standing with respect to operating efficiency and what improvements in business operations and practices he might make to raise his level of efficiency and income.

Providing new marketing information (IND-D-2)

The quarterly (March 1 and September 1) sow farrowing reports were continued to provide hog producers with more frequent information on prospective hog marketings.

Experimental market news program for hogs (IND-D-3)

This project was terminated during the year.

IOWA

Providing new market information (IOWA-D-1)

The Iowa Crop and Livestock Reporting Service continued the program which provides livestock producers, processors, and marketing agencies with new and more timely information that will assist them in appraising current and future marketing prospects for cattle and hogs. During the past year surveys were made to obtain information on monthly sow farrowings, on the age of hogs marketed, forecasts of monthly marketings of hogs from Iowa farms, the pattern of calf births, monthly pig litter size data, and hog and cattle inventory patterns.

In connection with the quarterly sow farrowing report, the March 1 and September 1 estimates were prepared and released for sows farrowing for the following 3 months and 6 months. Inventory numbers of all hogs 6 months and over, and hogs 3 to 6 months on March 1 and September 1 were also released. These two surveys supplement the regular June 1 and December 1 estimates of hog inventories, farrowings, and intentions to farrow. The quarterly farrowing surveys which are now underway in 10 States provide data needed for releasing more frequent, hence more current, information on more than 70 percent of the annual United States pig crop. Changes in plans by hog raisers based upon various local and national conditions are now available with less time lag. Intention reports are much more significant because of their timeliness and provide important information for use in planning future marketings. The information obtained from the sow farrowing and other surveys is widely used by the radio and press in their releases which reach producers, processors, and livestock marketing agencies throughout Iowa and adjoining States.

KANSAS

Improving the quality of dairy products (KAN-A-1)

The Dairy Division of the State Board of Agriculture continued its program of improving the quality of dairy products by providing assistance to

dairymen, cream stations, and dairy processing plants in detecting and eliminating sources of contamination, adopting better temperature control procedures, and improving processing methods. Emphasis was placed on the elimination of low quality milk and cream used in the processing of dairy products, in improving the flavor of the finished product and in reducing losses of both raw and finished dairy products. In conducting the program to improve butter quality, the Dairy Division held grading schools for butter makers, plant graders, and cream station field superintendents, and participated in such events as "cream straining days" at which representatives of the Dairy Division at a cream buying station observed the quality of cream being delivered, explained to producers reasons for downgrading, and assisted the operator in improving sampling and grading methods. The division also conducted surveys in butter plants to evaluate the quality of cream being received, as well as sanitation procedures and manufacturing methods and equipment. During these surveys, division representatives demonstrated the use and value of the Water Insoluble Acid test in quality control procedures.

In assisting manufacturers of cheese, ice cream, condensed and powdered milk in improving their products, the division placed major emphasis on upgrading the quality of the raw product. Plant surveys were continued and the recommendations based thereon stimulated manufacturers to make further improvements in plant equipment and sanitation procedures.

As a phase of its regular program supported with State funds, the division continued sediment testing and can checking activities. In connection with can check days, for example, division specialists examined 37,866 cans, of which 3,021 were condemned. Several of the plants participating in this activity established a regular can checking program. As a result of these activities designed to improve quality, the amount of milk and cream condemned has been substantially reduced. For example, 18,135 gallons of milk and cream were condemned from October 1, 1957, to September 30, 1958, compared with 30,083 gallons for the same period during the previous year.

Improving marketing methods and expanding outlets (KAN-B-1)

The Kansas Board of Agriculture continued its long-range quality improvement program for eggs. During the past year Board specialists, in cooperation with the Kansas Poultry Improvement Association and the Extension Service, held 14 meetings at which proper methods of candling, grading, and handling of eggs were demonstrated to about 2,900 persons. In addition they conducted egg grading schools at four centralized locations in the State to train new candlers and graders and to provide a refresher course for those who had taken the training the preceding year. In cooperation with the State Board of Vocational Education, training programs in egg candling and grading were carried out in 12 district schools to train vocational agricultural instructors and in 7 district schools to train vocational agricultural students. The film made by the Kansas board last year, "Marketing Quality Eggs," was booked 42 times in 11 States for 85 showings to about 13,500 persons.

Benefits of the egg quality improvement program are showing up in the increasing volume of eggs graded under Federal-State supervision. Although there was no increase in the number of plants using Federal-State inspection, the volume inspected increased from 461,000 cases the preceding year to 500,000 cases last year. It is estimated that the producers of these eggs received last year an average price premium of 4½ cents a dozen over ungraded eggs, or an additional income of $675,000.

The work with egg packing and breaking plants in improving operating efficiency was continued. For example, assistance was provided two egg marketing firms during the past year in the installation of egg breaking rooms. By adding these facilities, these two plants have been able to increase prices paid producers by about $1 per case.

Wheat.--The Kansas Board of Agriculture initiated work to assist the newly formed Kansas Wheat Commission in its promotion and market development activities. The Kansas board enlisted the support of home economics teachers and home demonstration agents in Kansas in a program to present facts about the nutritional value of wheat to students and adults. The Kansas board also cooperated with the Kansas Wheat Commission and the Feed and Grain Division, Foreign Agriculture Service, United States Department of Agriculture, in showing storage and processing facilities for wheat to several delegations from foreign countries and providing them with information regarding the milling qualities of Hard Red winter wheat.

Work is underway on a publication which will contain current information on the Kansas wheat industry. This publication deals with all phases of production, marketing, and utilization of Kansas wheat. This work is being done in cooperation with the Kansas Wheat Commission, Kansas State College Milling Department, State Historical Society, and Kansas Extension Service.

Eggs, poultry, milk, dairy products, and meat.--Specialists of the Kansas Board of Agriculture again participated in programs to promote increased consumption of Kansas agricultural products. The programs were conducted in cooperation with State and national dairy, meat, poultry, and egg producer organizations. The work conducted under this program included demonstrations before various civic groups and on television on how to prepare and use these products. During the Lenten season, specialists of the board helped the Kansas Ice Cream and Milk Institute and dairy interests in southeast Kansas in promoting cottage cheese. In connection with this program 27 demonstrations highlighting cottage cheese and its many uses were held in 15 communities throughout the State.

In cooperation with the Kansas Farm Bureau and the National Livestock and Meat Board, five meat merchandising schools were held in eastern Kansas. The subjects covered in these schools included the selection, care, preparation, and cooking of various cuts of beef, pork, and lamb.

Assistance was given the Kansas Poultry and Egg Board and the Kansas Turkey Federation in staging four promotional events for poultry and eggs--March Egg Month, Mid-Summer Turkey Time, Sandwich Month, and Better Breakfast Month.

Vegetables.--Work was continued in the southwest Kansas vegetable area to assist producers and marketing agencies in improving the grade and pack of such vegetables as onions, cantaloups, potatoes, carrots, red beets, and squash. This assistance enabled producers and marketing agencies to secure more satisfactory market outlets and improved returns.

Furnishing new market information and basic data (KAN-D-1)

Grain.--To assist Kansas wheat farmers in orderly marketing of the near-record 1958 wheat crop, the Kansas Board of Agriculture prepared a detailed county-by-county report showing total commercial grain storage capacity and percentage of capacity in use. This report, which revealed the storage situation in each county just ahead of the harvest season, provided wheat growers, railroads, grain men, and marketing officials with the information needed for efficient handling and movement of the wheat crop.

The wheat quality survey was continued. Data on test weight, protein content, and moisture content were obtained by counties concurrent with the movement of wheat to market. A total of 8,621 carload shipments representing all of the 105 Kansas counties were included in the sample. The data were analyzed, summarized, and released each Tuesday and Friday morning during the wheat marketing season. At the end of the season, a final summary of the data was released. This service helps millers and other grain buyers locate wheat of the quality desired and facilitates the marketing of the crop.

A sorghum variety survey was made to determine by counties the distribution of sorghum acreage seeded to each variety. Sorghum is second only to wheat among the crops grown in Kansas. The information on available supplies of sorghum by varieties is useful to Kansas producers in marketing their crop. The survey also provided data for seed growers and dealers and thus facilitated the marketing of the sorghum seed crop.

Data on wheat prices received by farmers by crop reporting districts indicating the market grade and the proportion of wheat marketed in each grade were released monthly by the Division of Statistics. These reports were sent to producers, millers, grain dealers, Kansas State College and Extension Division, and other interested persons. This information has been extremely valuable in determining statewide prices received for all wheat and in reviewing the reliability of the long-time series of prices.

Other products.--In connection with the program to obtain new and important basic marketing data, the following lines of work were undertaken during the past year: Quarterly livestock survey, beef cattle prices by classes, and other poultry and egg marketing information. This information was analyzed, summarized, and issued to producers, dealers, handlers, processors, and other interested persons by the Division of Statistics of the Kansas Board of Agriculture.

Improving marketing methods and expanding outlets (KY-B-1)

Eggs.--The Kentucky Department of Agriculture continued its program of demonstrating and assisting producers and egg handlers in adopting proper methods of candling, grading, and handling of eggs. Personal contacts, meetings, and egg grading schools were the means used in conducting the program. Kentucky egg marketing specialists cooperated closely with the egg law inspectors in helping individual marketing agencies correct quality problems. For example, egg inspectors notified Department marketing specialists that a chainstore organization was selling eggs that did not meet the quality as labeled. Marketing specialists investigated this problem and found that the poor quality was caused by rough handling in delivering the eggs to retail outlets. After the cause of the poor quality was eliminated, the chain organization's egg sales increased. As a result of the program, many retail outlets in Kentucky are reported to have substantially increased their purchases of locally produced eggs.

Other activities conducted under this project included assistance to the egg industry in conducting the March Egg Month promotion and work with poultry processing plants to help them meet the requirements of the National Poultry Products Inspection Act.

Fruits and vegetables.--During the year the Kentucky department aided producers and marketing agencies in improving the quality of and expanding market outlets for strawberries, sweet corn, green beans, tomatoes, cabbage, and other fruits and vegetables. Marketing specialists demonstrated proper methods of picking, packing, and grading fruits and vegetables at meetings over the State and at individual farms and packinghouses. At harvest time, these specialists worked at receiving platforms and packing sheds to show growers and shippers what improvements they needed to make in their packs to realize maximum returns. Specialists also followed the products to terminal markets and reported back to the shippers the condition and reception of products at the terminal market as well as other pertinent observations concerning improvements needed in marketing methods. For example, by working with a cooperative strawberry shipping association on grading requirements, proper methods of packing and handling, transportation problems, contacting prospective buyers, and developing promotion material, specialists helped this association to obtain the highest net return per crate for strawberries of any association in Kentucky during the 1958 marketing season. It is estimated that this marketing assistance increased the returns of producers shipping through the association by about $15,000.

The Kentucky department continued its program of distributing material to producers on grades and standards and distribution of the "Buyer's Guide," which provided information to prospective buyers on acreages, varieties, transportation, icing and loading facilities, etc. A map was attached to this guide which indicated routes and shortest distances to fruit and vegetable shipping points throughout the State.

Livestock.--Specialists continued to encourage the buying and selling of lambs on a graded basis. As a result, approximately 1,500 lambs were sold in this manner through the lamb pools held in the western part of the State. The department assisted in starting Federal-State grading of lambs at an auction, and in organizing and conducting a special feeder pig sale to demonstrate the advantages of selling in uniform lots, according to size, color, breed, and grade. The pigs sold at this sale returned producers $5 per head more than if they had been sold through regular channels.

In cooperation with the Extension Service, the department worked with 12 feeder calf associations in arranging and publicizing special demonstrational sales. Producers were shown how to select animals for the sale, which served the twofold purpose of training the producer to recognize grades and of providing information to prospective buyers about the breed, age, sex, weight, and quality of the animals to be sold.

Sorghum and honey.--During the past year, a department specialist worked very closely with the Hancock County Sorghum Cooperative and a large number of individual growers on quality and merchandising problems. Assistance was also provided in designing two new sorghum plants. In cooperation with county agents, demonstrations were held on the proper method of grading, handling, and packaging honey.

Providing basic agricultural data (KY-D-1)

A survey of the beef cattle industry was completed during the year. The data obtained on the number, ages, breeds, and methods of marketing will be published next year. The prime objective of the survey was to provide producers, handlers, and others in the livestock industry with up-to-date and comprehensive information relating to the marketing of beef cattle in Kentucky. Work was initiated during the year to obtain new and basic information on the marketing of lambs and wool.

LOUISIANA

Improving quality and expanding market outlets (LA-A-1)

Strawberries.--The program conducted by the Louisiana Department of Agriculture, in cooperation with the Extension Service, the Agricultural Experiment Station, the U. S. Department of Agriculture, and the Louisiana Strawberry Commission, to improve the harvesting, grading, packaging, and transportation of Louisiana strawberries was continued. During the 1958 shipping season, a department specialist worked with the Louisiana Strawberry Commission in promoting the sale of strawberries in New Orleans. It is reported that this experimental promotional campaign, which utilized television, radio, newspapers, and personal contacts, resulted in a fourfold increase in the sale of strawberries in New Orleans as compared to sales in previous years when no promotional work was done.

Vegetables.--As a result of the reduction in cotton allotments, farmers in northeastern Louisiana have turned to vegetable crops to bolster their incomes. The Louisiana department assisted these growers and their marketing agencies in adopting proper methods of harvesting, grading, and packing such products as okra, tomatoes, and sweetpotatoes.

A similar program, involving demonstrations of proper methods of picking, grading, packaging, and handling fruits and vegetables, was conducted in central Louisiana.

Dairy products.--The Louisiana Department of Agriculture continued its comprehensive service program to expand market outlets for milk and other Louisiana dairy products. Milk plants were informed by department releases regarding the location, price, and quantities of milk available in the various areas of the State to facilitate the transfer of milk from surplus to deficit areas. It is reported that last year approximately 17½ million pounds of milk were so transferred in order to correct imbalances of supplies and needs for fluid milk and cream. As a result of these transfers, more milk was sold under the Class 1 price, which provided an additional income to producers of about $480,000 during the year.

Milk plants also were assisted in improving the butterfat sampling procedure, and in the reduction in plant losses of milk, butterfat, and milk products by improving methods of accounting for these products.

Improving marketing methods and expanding outlets (poultry and eggs) (LA-A-2)

In continuing the program of assisting producers, packers, processors, and retailers in improving the grading, handling, processing, merchandising, and retailing of poultry and eggs, 33 demonstrations were held to explain official grade requirements, and about 1,370 visits were made to processing plants, wholesale establishments, and retail stores within the State. Ten egg grading and packing plants that packed 239,000 cases of eggs during the year and 4 poultry processing plants that processed about 34 million pounds of poultry cooperated in the Louisiana Grade Label Program. These plants have been cooperating in the department's quality improvement program for several years.

The Louisiana department helped several poultry and egg plants to improve plant facilities, equipment layouts, and work methods so as to enable them to increase the efficiency of their operations and comply with the requirements of the National Poultry Products Inspection Act.

The department prepared and distributed to the poultry industry a directory entitled "Louisiana Processors, Dealers, and Distributors."

Disseminating special market information (general agricultural products) (LA-B-1)

The department's monthly "Agricultural Products Availability" report providing information on the variety, kind, quantity, location, and date of

expected harvest of various vegetables was distributed to truck organizations, brokers, market managers, produce dealers, and other firms engaged in the marketing and distribution of farm products. During the past year, an average of about 950 of these reports were distributed each month. A chart was added to the reports this past year showing the normal shipping dates for major fruit and vegetable crops.

Improving the packaging, handling, transportation of farm products (LA-C-1)

The Louisiana department, in conjunction with the Department of Agricultural Economics of Louisiana State University, conducted tests on the merchandising value of three experimental fiberboard strawberry containers. One container consisted of three tiers of 8-pint trays forming a 24-pint shipping container that corresponds approximately to the dimensions of the presently used wirebound crate. The second container consisted of a single-layer, 12-pint flat with wire handles in each end to serve as stacking tabs. The third container comprised two tiers of 12-pint trays, connected at each end by a wire loop which extended through the top tray to serve as a stacking tab as well as a handle for the master unit. The tests demonstrated that under normal handling conditions all the experimental containers were satisfactory. Advantages of the experimental containers were that stripping which is required to hold wirebound crates in place in a truck or rail car can be eliminated and that bruising and decay were reduced. The results of the demonstrational tests will be made available to strawberry packers to aid them in deciding whether to adopt these new containers. The Louisiana department also cooperated with the Agricultural Marketing Service, United States Department of Agriculture, in conducting precooling and refrigeration tests on both truck and express shipments of strawberries. This work was completed during the 1958 strawberry marketing season and publication of the findings is planned at an early date.

The Louisiana department held a meeting in the strawberry area in January 1958, with representatives of railroads, express company, Louisiana State University, Interstate Commerce, U. S. Department of Agriculture, producers, and shippers, to discuss transportation problems directly affecting the marketing of the strawberry crop.

Improving efficiency of cotton gins (LA-C-2)

This service, under which cotton ginners are assisted in improving the efficiency of their ginning operations and the quality of the ginned cotton, has been in continuous operation since 1951. Prior to that time the percentage of "rough prep" cotton from Louisiana gins had been averaging about 13 percent. The assistance given ginners under this program has enabled them to reduce this percentage to about 1 percent, thus making the Louisiana cotton more acceptable to the mills and enhancing its value.

During the past year, 138 calls were made to assist ginners in selecting and installing the proper type of equipment and in adopting improved gin processing techniques. A directory of cotton gins in operation in the State

for the year ending December 30, 1957 was prepared and distributed to cotton gin organizations and manufacturers, cotton oil mills, Government agencies, and others.

The gin specialist assigned to this program cooperated closely with the local cotton classing offices of the U. S. Department of Agriculture, the USDA Cotton Ginning Research Laboratory at Stoneville, Miss., the Extension Service, ginning associations, gin equipment manufacturers, and cottonseed oil millers.

Disseminating special market information (timber products) (LA-D-1)

The Louisiana department continued to provide timber producers and buyers with needed information about the marketing of timber products in the State. The quarterly reports which it issued during the year were based on data furnished by about 165 independent timber buyers, pulpwood mills, sawmills, and stump plants. Distribution of the reports was achieved through the cooperation of the Forestry Division of the Agricultural Extension Service and county agents. Information which these reports provide on prices has improved the bargaining position of timber producers and has helped to establish market values which reflect more accurately the varying qualities of timber products. Thus, the reports have indirectly stimulated greater interest on the part of producers in improved forestry management.

MAINE

Improving marketing methods and expanding market outlets (ME-B-1)

Potatoes.--During the 1957-58 marketing season, the Maine Department of Agriculture cooperated with the Maine Potato Commission in extending potato promotion activities to 193 markets in 28 States. In this work, contacts were made with brokers, service wholesalers, and independent and chainstore operators to explain the Maine quality program and to encourage the purchase of potatoes packed under the State of Maine Blue, White, and Red trademark. On visits to the markets, specialists assisted wholesalers and retailers in conducting in-store promotions. On these visits, the department's representatives also observed shipments of Maine potatoes being received and communicated back to the shippers complaints regarding grade, size, and condition, and suggestions for improvement in the pack which would enhance trade acceptance.

The department also cooperated with the Maine Potato Commission, Maine Grocers' Association, Maine Hotel and Restaurant Association, and the Maine Potato Council in staging a "Maine Potato Week" promotion during February. In this promotion event, retail store operators were encouraged to build special floor and window displays and use point-of-sale material provided by the Potato Commission. In addition, informational releases about Maine potatoes were prepared for use by newspapers, trade papers, radio, and

television stations during the promotion period. The results of these efforts were so satisfactory that it is now planned to make "Maine Potato Week" an annual event.

Other service activities on potatoes included assistance in promoting a new processed potato called frozen stuffed baked potatoes. A contact made by a department representative resulted in establishing an important outlet for this product. Similar assistance was given processors in developing outlets for other processed Maine potato products.

The Maine department sponsored a plan to extend the marketing period for Maine potatoes through the summer months to take advantage of the local demand from summer resorts and camps. The introduction of sprout inhibitors and the availability of cold-storage facilities has made this feasible. Results this past season indicate that the plan will be successful.

During the past year contacts were made with customers of Maine seed potatoes in Virginia, North Carolina, South Carolina, Georgia, and Florida to discuss quality, varietal preference, and other factors that are important in determining the future needs of seed customers.

Poultry and eggs.--The department conducted demonstrations of proper methods of candling, packaging, and handling eggs at meetings and egg schools for the benefit of producers, marketing agencies, and consumers. For example, egg candling and grading demonstrations were held in retail stores throughout the State to show consumers the techniques involved in candling and sizing eggs and to inform them of the temperature requirements for keeping eggs in the home. The improvement made in grading and packaging under this program has been instrumental in increasing the sale of eggs.

In promoting Grade A ready-to-cook poultry, packaged poultry parts, and turkey, proper methods of poultry cutting, outdoor barbecuing, and broiling were demonstrated on five television programs. As a result of these activities, increased quantities of ready-to-cook poultry are being sold on a graded basis. Four of the eight major processing plants in Maine identify their Grade A ready-to-cook poultry with the State of Maine label.

During the past year, 50 organizations were helped to arrange and conduct chicken barbecues. This program has resulted in a tremendous increase in chicken barbecues as annual or semiannual events of various groups. As a result of the successful trials of "store barbecues," three major poultry processors conducted similar barbecues that were successful in increasing the sale of State of Maine Brand chickens.

The Maine department cooperated with the Maine Poultry Improvement Association in sponsoring the Maine Broiler Festival. Employees of the department presented egg candling, poultry cutting, and backyard barbecuing demonstrations in a large tent appropriately named the "Egg-to-Eating Tent." Interest in these demonstrations kept the tent well filled, and the department's

personnel were kept busy answering questions, particularly from newly married housewives, about the preparation and cooking of chicken and eggs. Approximately 10,000 persons viewed the demonstrations.

January Egg Month was highlighted by the Annual Egg Breakfast held in conjunction with the Agricultural Trades Show and attended by personalities from radio, TV, and the press. This annual event helps to acquaint public-relations personnel with the purpose and importance of the Maine department's merchandising and promotional programs. "Maine Barbecue," the wide-screen short-subject movie which the department produced and released to New York and Boston area theaters a year ago, is still being shown to large audiences. This film, designed to stimulate chicken barbecues in metropolitan areas where Maine has an important share of the broiler market, features one of Maine's marketing specialists as the barbecuer. The film has been shown 3,410 times in 442 theaters to audiences totaling 779,802 people. It is being featured in Maine theatres and "drive-ins" as an inducement to Maine summer vacationists to purchase Maine chicken in their home State.

In cooperation with the Maine Department of Economic Development, the Maine Poultry Associates, canners, processors, and the Hotel Somerset in Boston, Mass., a chicken barbecue was conducted for Ted Williams, nationally known baseball player. Barbecuing equipment and State of Maine promotional material were set up beside the swimming pool at the Hotel Somerset, and Maine chicken was barbecued and served to guests at a special "Jimmy Fund" dinner. The sum of $1,500 was realized by the fund and newspapers throughout the Nation carried the barbecue picture and story.

The National Broiler Council entertained nationally prominent food editors on a tour of Maine. One feature of the tour was a Maine chicken barbecue at the Blaine Mansion in Augusta, home of the current governor.

In cooperation with the New England Crop Reporting Service, the Maine Department of Agriculture has continued weekly collections of information showing the number of eggs set in Maine's commercial hatcheries. This report shows the number of chicks hatched, and the number of broiler chicks placed in Maine, Connecticut, Massachusetts, New Hampshire, Maryland, Virginia, and Georgia, and in South America.

At the request of its broiler processors, Maine has developed and is now issuing a "Weekly Maine Poultry Market Information Report." This daily report includes information relating to inventory, production, destination of shipments, farm situation, farm price, percent of production eviscerated, and percentage processed as "New York dressed." Processors have found this information very useful in their marketing operations.

Milk.--During the year, marketing specialists contacted all school superintendents and principals in Maine to enroll them in or expand their participation in the National School Milk Programs. Special emphasis was placed this past year on proper refrigeration and handling of milk after delivery to the school. Milk vending machines appeared for the first time

in several schools throughout the State. In many schools, a sharp increase in milk consumption took place after the installation of the vending machine.

Special school reference kits were compiled and distributed by the marketing staff from material furnished by the Dairy Council. It is evident from the constantly increasing demand for Dairy Council material and films that school personnel are becoming more and more aware of the importance of milk in the school program.

Reports compiled by the Maine Department of Education indicate that 15,647,469 half-pints of milk were consumed this year in Maine schools, an increase of about 600,000 half-pints over the amount consumed last year.

Representatives of the department also made personal contact with directors of eligible summer camps early in the Spring urging them to make application for the program. Technical assistance in rearranging camp programs to meet the requirements of the Federal program was given in several cases. In 1958, forty-six nonprofit summer camps participated in the Special Milk Program.

Staff members made personal contacts with the 150 major dealers of the State, soliciting their cooperation in the distribution of June Dairy Month promotion materials. This material was supplied and paid for by the Maine Milk Committee. The Maine Dairy Club was assisted in organizing its Maine Dairy Day celebration, the highlight of which was the coronation of the 1958 Maine Dairy Princess.

Staff members appeared as guests of both radio and television programs during June to remind people of the value of milk and the various activities taking place during the month.

Special emphasis this year is being placed on a statewide hotel and restaurant promotion in which over 200 restaurants and hotels are competing for a total of $4,200 in cash awards. Winners in the contest will be judged on the basis of the most milk sold per seat in each establishment. Funds for this promotion are furnished by the Maine Milk Committee.

Red meats.--The department, in cooperation with the National Livestock and Meat Board, held four meat-cutting and merchandising schools in Portland, Lewiston, Bangor, and Presque Isle for wholesalers, retailers, hotel operators, and consumers to familiarize them with proper methods of buying, cutting, handling, merchandising, and pricing red meat and meat cuts. As a result of these schools, the demand for packaged red meat has been maintained at a high level. Attendance at the schools showed an increase over last year and existing accommodations were filled to capacity.

Demonstrations featuring meat nutrition and cooking methods were held in high schools located centrally in four sections of the State. The National Livestock and Meat Board office in Chicago informed the department that they

had received 40 letters from home economics teachers expressing their appreciation for the board's and the department's cooperation in this program.

The emphasis in the work conducted under this project last year has been on cutting demonstrations on the "hard-to-sell" forequarter and muscle parts. It is reported that, as a result of this program, there has been an increase in the demand for cuts of meat that are normally considered difficult to sell.

Maine cream style canned corn.--At the request of the Maine corn canning industry, the department assisted in a promotion and merchandising campaign to help this industry move an excessive inventory of about 900,000 cases of cream style corn.

Marketing specialists participated in this program by serving on committees of the State grange, service clubs, institutions, hotels, restaurants, and the milk industry, and by working with school lunch program directors, appearing on radio and TV programs, and preparing or furnishing materials to trade papers, the press, food editors, and wholesale and retail grocers. In addition, store window displays were set up in Portland, Lewiston, and Bangor, and in-store promotion displays in other cities in Maine and the other New England States. Food editors, radio, and TV were supplied with ample recipe material to use on their programs and in their columns.

Two dinner meetings were held in which Governor Muskie presented the corn canners' marketing problem to brokers and buyers of canned food. The dairy industry cooperated by having special corn chowder recipes printed on bottle hangers for distribution by milk route delivery men to 100,000 Maine homes in a 1-week period.

By assisting in expanding outlets, this marketing service work enabled Maine canners to reduce their inventories to a manageable level of about 100,000 cases at the beginning of the 1958-59 marketing season.

Apples.--Assistance continued to be given orchardists, wholesalers, and retailers on problems of grading, handling, packaging, and displaying apples. During the year, five apple grading schools were held to demonstrate the proper methods of grading, packaging, and handling apples and to provide general assistance with marketing problems. In addition, the department cooperated with the Maine Apple Marketing Committee by assisting in setting up displays in non-food stores and exhibits in public places and in distributing industry purchased point-of-sale material to the trade. Marketing specialists appeared on radio and television programs as guests of food editors to talk about Maine apples and prepared material to be used in the apple promotion campaigns by food editors, all Maine newspapers, and on radio and television programs. The entire campaign was conducted to tie in with the National Apple Week promotion.

During February the department assisted the Maine Pomological Society in the "Maine Apples on Parade Campaign" by distributing point-of-sale

material and assisting grocers and restaurant operators in setting up special apple displays. It is reported that the apple marketing service work resulted in improved grading and packaging of Maine apples and in increased sales during the winter months when the movement of Maine apples is normally slow.

Dry beans.--Assistance was given the Maine Dry Bean Commission in its promotion campaign by furnishing information to the trade about Maine dry and canned beans, and on how to set up displays and use point-of-sale material properly when this product is featured. Eight firms have been licensed to market Maine beans under the Maine Blue, White, and Red trademark. During the past year the sales of beans under this trademark increased since customers recognized this label as indicating a high standard of quality.

Maple syrup.--The department again assisted in the program to promote the marketing of maple syrup under the State of Maine trademark. Guest appearances were made on radio and television programs and information and material provided food editors. In addition, department personnel prepared eight information releases on quality, quantity, demand, bulk prices, prices by grade, and other pertinent marketing information on maple syrup for local and out-of-State areas. During the past year, 25 producers were licensed to pack maple syrup under the State of Maine trademark. This program was instrumental in the increased sale of Maine maple syrup to restaurants, hotels, and grocery stores throughout the State.

Blueberries.--Assistance was given in the Maine blueberry promotion program by furnishing information and material for use by food editors, newspapers, and on radio and television programs. This program assisted in the marketing of a blueberry crop estimated at a value of over $3,000,000 to Maine's agricultural economy.

Improving marketing methods, facilities, and equipment (ME-C-1)

Work in this field has recently been initiated to assist producers and marketing agencies with such problems as remodeling and designing new facilities, and to assist retailers in the adoption of more efficient work methods and equipment and improving the layout for handling produce in their backroom operations.

MARYLAND

Improving grading and handling methods for grain and soybeans (MD-A-1)

A major problem in marketing Maryland grain has been the wide differences between shipping point and terminal elevator weights. Following the 1956 soybean season most of the country grain dealers on the Eastern Shore complained of excessive deficits in the net weight of cars at the terminal end. Deficits of as much as 3,000 pounds per car were quite common. As a result of this situation, the Maryland Department of Markets made a detailed study of the

shipping point-terminal elevator weight relationships in the 1957 season to determine if the 1956 experience was repeated. It was found that the weight discrepancies continued. On the basis of these findings the Department of Markets enlisted the cooperation of a number of agencies, such as the Baltimore Chamber of Commerce, the railroads, and terminal elevator interests to carefully evaluate the problems and bring about corrective measures. Some progress has been made in reducing the incidence of weight shortages at the terminal end but further work is needed and is underway.

The Department of Markets conducted a survey to appraise the oil content of the 1957 Maryland soybean crop. The facts with regard to the oil content which showed that Maryland soybeans compared favorably with those from other areas were presented to the grain trade to counteract rumors of inferior quality which were adversely affecting grower prices.

The service of calibrating moisture meters for grain dealers was continued. Among other activities to improve grain marketing, specialists conducted a grain grading school for employees of a grain marketing agency. They also disseminated information on proper methods of harvesting, storing, grading, and shipping grain. One railroad requested 100 copies of a release on recommended procedures for loading and shipping grain. The weekly summary of the Maryland grain and hay market containing pertinent information on the marketing of Maryland grain crops was continued.

Improving the marketing of fruits and vegetables (MD-B-1)

Apples and peaches.--In response to a request from the Maryland Horticultural Society, the Maryland Department of Markets prepared and disseminated grading manuals to assist apple graders in improving their work and to provide growers and marketing agencies with a more easily understood description of the official apple grades. These manuals were used by many of the graders employed in Maryland apple and peach packinghouses to check the accuracy of their grading. Several nearby apple-producing States requested and were provided copies of the manuals.

Sweetpotatoes.--Maryland sweetpotato processors were assisted in the development of more equitable and understandable terms in contracts and specifications for securing desired supplies of the raw product. Two processors will purchase their raw product requirements next season on the basis of these recommended contract provisions and specifications. The raw product specifications will reflect more nearly the internal quality needed by processors. Contract provisions incorporate a quality incentive plan to encourage producer cooperation.

General.--Work was continued with the Baltimore Wholesale Market Authority to develop a new wholesale fruit and vegetable market in Baltimore. The target date for the opening of the new market is May 1, 1959. The authority has signed agreements from 21 wholesalers. It is expected that this number will be increased considerably once construction gets underway. There has been interest

evidenced by auxiliary companies, such as seafood dealers, basket companies, ice company, gasoline service, and banks, for space on the market. Assistance is being given the authority in securing a manager for the new market and in developing lease agreements and operational rules and regulations. A specialist of the division represented the authority at the annual meeting of the National Association of Produce Market Managers.

Improving methods of grading and marketing (livestock and wool) (MD-B-2)

Under this project, the Maryland Department of Markets provides services and leadership designed to improve quality, promote the use of official grades of livestock and organized selling methods, and encourage livestock conservation.

Assistance was given the Maryland livestock industry last year in organizing and conducting special feeder cattle and calf sales, feeder pig sales, wool and slaughter lamb pools. It is estimated that these activities increased returns to participating producers by at least $55,000 during the year. By stimulating competition, the special sales also had indirect but difficult-to-estimate effects on local livestock prices.

Organized selling of feeder pigs is a relatively new activity in Maryland. There is considerable demand for feeder pigs by both garbage and grain feeders in Maryland and neighboring States. In cooperation with the Maryland Swine Producers Association, Inc., two sales involving 3,189 head were held last year on the Western Shore. The success of these sales has stimulated interest for a similar program among hog producers on the Eastern Shore of Maryland. A sale has been planned for this area early next year.

The wool pool has proved to be a popular method of marketing wool in Maryland. In 1957, the first year of the pool operation, 156 producers participated and consigned 37,000 pounds of wool. Last year 264 producers participated and consigned 64,000 pounds of wool to the pool. A survey of 1958 wool sales in Maryland disclosed that prices received by pool participants averaged 4 to 6 cents per pound above those received by nonparticipants.

Popularity of the wool pools induced Maryland sheep producers to experiment with slaughter lamb pools last year. Although only 753 lambs were consigned to the pools due to skepticism on the part of many producers, the higher prices received by participants indicate that this method is worthy of further testing.

Advantages to producers of the organized method of marketing established in Maryland are:

1. Provides producers with an additional outlet.

2. Assists producers in evaluating the grade and quality of their livestock and livestock products.

3. Provides producers with a few head the same market opportunity enjoyed by producers with large numbers.

4. Attracts more buyers, thus stimulates competition.

5. Provides producers an outlet through which they can be rewarded for superior quality.

The 1958 livestock conservation program consisted mainly of illustrated talks given at meetings throughout the State and the displaying of exhibits on conservation at leading agricultural events. The illustrated talks and exhibits were supported by radio tapes prepared by the livestock specialist and sent to radio stations in Maryland and adjacent areas. Newspaper releases on this subject also were prepared and furnished these news media.

Improving efficiency of Maryland fruit and vegetable processing plants and the merchandising of processed fruits and vegetables (MD-C-1)

Assistance was given a group of canners in forming an organization for the joint marketing of canned products under a common label. Personnel was not available to continue the work with canners to improve plant efficiency.

Improving basic data and marketing information for eggs (MD-D-1)

A much-needed statewide laying flock survey was completed during the year to show the current status of and problems inherent in Maryland's egg industry and to clarify marketing problems facing egg producers and buyers. The summarization of this completed survey and its analysis was released as a publication entitled "Laying Flocks in Maryland." This study of layer and replacement numbers, breeds, egg production, source of stock, sales outlets utilized, quality practices, and facilities available was based upon quarterly surveys of identical segments throughout the State over the period of a year. The actual survey technique has not been used by any other State and may provide a new basis for obtaining poultry data. Random location of the segments was determined according to the number of layers within minor civil divisions, thereby causing the sample to be proportionately heavier in areas of densest layer population. Data thus obtained and published have already shown their value in awakening industry leaders to the need for concentrating on quality production and marketing practices with an emphasis on market outlets willing to pay for quality.

MASSACHUSETTS

Maintaining and improving quality of dairy and other agricultural products (MASS-A-1)

The Massachusetts Department of Agriculture, in cooperation with the Extension Service, initiated a program to improve milk flavor. This is being accomplished by working with milk producers to eliminate the causes of off-flavor milk on the farm and with milk dealers to prevent the development of off-flavors resulting from the improper handling of milk at any level of marketing through to the consumer.

The general procedure in conducting this program was as follows:

1. Contacts were made with all milk dealers within a given area to explain the purpose of the program, methods and procedures to be used, responsibilities of the dealer, and expected results.

2. Samples of raw milk were collected from the milk plants and scored for flavor by a panel and the results sent to the persons concerned. The panels were closely supervised to be sure that proper methods and procedures were used in scoring and judging the samples.

3. Producers and plant operators were contacted and assisted in correcting the conditions responsible for off-flavors. In conducting this phase of the work, close cooperation was maintained among dairy plant fieldmen, dairy and milk inspectors, and Extension Service and department personnel.

Three types of panels were set up to score the milk samples collected from dealers. They are described as follows:

1. Industry panel--consisting of representatives of milk dealers, milk producers, and impartial persons. This type of panel has been used extensively in introducing the program and has the advantage of giving a large segment of the industry an introduction to the problems encountered throughout the industry.

2. Vo-Ag panels--consisting of the students enrolled in the Future Farmers of America chapters and studying the vocational-agricultural curriculum in the high schools throughout the State. This type of panel permits the scoring of large numbers of samples for a number of plants within an area on a regular basis. In smaller markets, the use of this type of panel has the advantage of including all the plants within the market at one time. Another advantage is that a large majority of the producers within a milk shed receive regular reports and assistance in improving the flavor of their milk, resulting in a general improvement throughout the market.

3. Plant panel--consisting of qualified employees of the milk plant. This type of panel provides the plant operator with constant control over the quality of his milk supply and processing operations. The department and the University of Massachusetts cooperate in providing the training of the plant panel and assist the plants in correcting flavor problems.

Since the inception of this program in February 1958, 141 milk plants and their 964 producer patrons have participated in the flavor program. The program of testing for 25 of these plants was conducted by the Vo-Ag panel. These plants and their producers receive a regular report on the flavor of their milk at least once a month. Several have adopted the plant panel plan of scoring flavor. This is being encouraged so as to free the Vo-Ag panels for work with additional plants that wish to enter the program.

In June 1958, a new phase of the program was started with the department and the University of Massachusetts cooperating in spot-checking the flavor

of milk at the retail level. These surveys have revealed the existence of flavor defects in a high percentage of cases. Confidential reports of these results were sent to the milk dealer concerned with an offer to assist him in correcting his particular flavor problem. The need for assistance to the dairy industry in correcting flavor problems has been clearly demonstrated through this program. Some examples of assistance given the industry are as follows:

At a medium-size dairy, processing an estimated 5,000 to 6,000 quarts daily, the initial scoring of samples carried out by a Vo-Ag unit showed 17 out of 28 producers reported as fair and poor, with the majority of the off-flavors classified as feed and unclean. Because of the extremely high incidence of off-flavors together with the large number of complaints received from consumers, this plant readily agreed to the scoring of milk at the plant and, once a week for 4 weeks, scored the milk received from their producers. As a result of this concentrated effort, the incidence of off-flavors dropped from 17 to about 5 with a lessening in intensity noted in these. Scoring of milk received from producers has been continued at this plant on a monthly basis with the last scoring of samples listing one minor off-flavor present.

In a large plant processing 25,000 to 30,000 quarts daily, the scoring carried out by the Vo-Ag panel indicated a persistent off-flavor in milk delivered by certain local producers. This operation was entirely bulk tank and the unclean off-flavor on one route was sufficient to cause this milk to be diverted to manufacturing purposes. This condition had persisted for more than 2 months and had not been cleared up even though daily samples for flavor were taken at the plant. A quality survey conducted on this route disclosed that the off-flavor problem originated on the farms of three producers. The department's marketing specialist assisted these producers in correcting the conditions responsible for the development of the off-flavors.

Providing new basic data on vegetables (MASS-D-1)

Under this project, the Massachusetts Crop Reporting Service provides data on the planting intentions of vegetable growers in the State. In connection with this work, 7,000 farms were surveyed and a list of 3,500 growers, classified by counties and towns, was compiled, and the acreages enumerated. The estimates on planted and harvested acreages, yield per acre, average prices received by growers, and farm value for each vegetable crop are based at the county level. These reports are released semimonthly during the marketing season as well as annually. The planting-intention surveys are supplemented by field work and monthly studies to provide the basis for estimating marketable supplies of vegetables. Unload and price data compiled by market reporters are used to check the estimates on available supplies.

The yield and price estimates for vegetables have been converted in terms of hundredweights and the historic records and charts have been put on this basis. The use of the system of hundredweights for reporting vegetable crops has made it possible to obtain a common denominator of price per unit and total value.

The timely information on marketable supplies of 45 vegetables and strawberries provided under this project has assisted Massachusetts vegetable producers in adjusting their production programs to conform more closely to market demands, and has thus tended to stabilize vegetable prices.

MICHIGAN

Developing methods of certifying nursery stock (MICH-A-1)

The Michigan Department of Agriculture continued its program to develop procedures for certifying virus-free nursery stock for cherries, peaches, strawberries, apples, brambles, and blueberries. The principal activities in connection with this program during the past year were: (1) Inspection of fields from which plants were to be moved into marketing channels; (2) locating and distributing virus-free clones of fruit stocks; (3) development of indexing hosts and procedures to aid in disease identification; (4) maintenance of a repository for disease-free clones of certain fruits, principally cherries and strawberries; and (5) aid to nurserymen in establishing disease-free scionwood blocks, and establishment of pest-free certification programs for fruit stocks.

The following table gives details on this past year's project activity for cherries:

Number of seedling peaches innoculated	100
Number of indexings on sour cherry	500
Number of indexings on Shiro-fugen cherry	400
Number of buds furnished to nurserymen	150,000
Number of trees distributed for budwood orchards	200
Number of rootstock seedlings distributed	2,000
Number of trees propagated for project use	300
Pounds of Mahaleb seed distributed	35
Number of 2-year-old Montmorencies inspected	22,200
Number of 2-year-old Montmorencies rogued	282

Project activities on behalf of the other fruits and berries were of a similar intensity.

Producers of strawberry plants in Michigan who have been cooperating with the Michigan department in the development of virus-free certification procedures were able to market over 2 million virus-free plants during the past year. An additional 10,000 foundation plants of the Robinson and Marshall varieties were distributed to these cooperating growers during the year. Plans are to distribute next year foundation stock of the Sparkle, Catskill, Gem, Pocahontas, Tennessee Beauty, Empire, Earlydawn, Surecrop, Red Glow, Armore, and Blakemore varieties.

Increased attention was given to the development of virus-free certification procedures for apples. The lack of suitable indexing hosts presents

a problem which must be overcome before this objective can be reached. The major activity during the year was concerned with the search for suitable indexing hosts.

Improving grading, handling, and packing (MICH-A-2)

Poultry and eggs.--The Michigan department continued its program of demonstrating official egg grades and proper grading methods to producers, egg dealers, retailers, and grading personnel. Demonstrations of egg quality factors also were given at county fairs and over television to acquaint consumers with egg grades.

Fruits and vegetables.--During the past year marketing specialists demonstrated proper methods of grading, packing, and marketing potatoes to producers in seven major production areas of the State. Seven meetings were held in cooperation with the Agricultural Marketing Service at which grading, branding, and shipping regulations were explained to 137 shippers, brokers, and retailers. The Michigan Potato Council, consisting of growers, packers, shippers, processors, brokers, and county agents, worked in conjunction with the Michigan department on the program to improve the quality of potatoes. It is reported that this program helped to improve the market quality of Michigan potatoes. For example, Michigan potatoes sold on the Detroit market were reported to have been of the highest quality in the past 20 years.

Apple producers, packers, and shippers also were assisted by department specialists in adopting proper grading, packaging, and storage practices for apples. The objective of this work is to enable the Michigan apple industry to place on the market a pack of apples generally superior to U. S. No. 1 quality. By following the recommendations of the Michigan department, strawberry growers in southwestern Michigan were able to market a record-size crop at prices averaging about $4 per 16-quart crate. This was considered to be an exceptionally high return in view of the available supply and is attributed in part to the active work of department specialists in putting across to growers a strict quality control program.

Marketing specialists also conducted demonstrations on proper grading methods for the benefit of peach growers. This program helped producers to obtain satisfactory prices for a 3,000,000-bushel peach crop. Grower deliveries to the Benton Harbor market contained the smallest percentage of undergrade fruit since the inception of this program in 1950. For example, only 21 out of 82,000 grower loads had to be returned to graders for regrading.

Marketing specialists also designed and constructed exhibits at county and State agricultural fairs which concentrated on the service activities of the department concerning the marketing of quality agricultural products.

Improving market news information (MICH-D-1)

During the past year the experimental price reporting program on poultry and egg prices at interior markets in Michigan was continued. Daily prices

on a grade basis and volume data based on information obtained from 50 poultry and egg buyers were disseminated to a national news service and to local radio and television stations. In addition this price information was disseminated daily over the local university radio station by a department specialist on the "Farm Hour" broadcast. The daily poultry and egg price information was summarized weekly and released to a mailing list composed of producers, buyers, county extension workers, and other interested persons.

As a result of this program, it is reported that prices paid producers have increased, that poultry and egg buyers have been better informed concerning State and local marketing conditions, that movement of poultry and eggs from surplus into deficit areas has tended to strengthen prices by relieving burdensome supplies, and that the public relations between the buyers and the producers have been improved.

Preliminary work has been done prior to the initiation of an experimental livestock marketing program to report livestock prices at local auctions throughout the State.

Providing basic data and special marketing information (MICH-D-2)

Onions.--From January through March, weekly releases on the Texas onion crop were sent to about 500 growers and dealers in Michigan to assist them in planning their marketing schedule so that there would be neither a gap nor a burdensome overlap between the marketing season of Michigan storage onions and the new crop from Texas. The initial release contained information on acreage, row spacing, and irrigation. The later releases included weekly departures from normal temperature and precipitation, daily maximum and minimum temperatures in or adjacent to the southern Texas onion-producing districts, and other pertinent information on the progress of the Texas onion crop. During the past year, the releases were issued to inform growers well in advance that the Texas crop would move to market about 2 weeks later than usual. On the basis of this information, Michigan growers held back about 300,000 hundredweight of onions for marketing during the first half of March, a period when marketings of the Texas early crop usually dominate the scene. By taking this action, Michigan growers received an additional return of $2 per hundredweight, or a total of $60,000.

Tests of different methods of objective sampling as a means of improving onion estimates were continued. This year's plans are to use "row samples" by topping and weighing the onions as a basis for determining the number of samples and most efficient sample size needed to obtain reliable production estimates by areas for the entire State.

A survey was made to determine the number of cherry trees by varieties and ages. These data showed a slowing down in the planting of sour cherries in northwest Michigan and a substantial increase in sweet cherries in all areas of the State. Last May a mailed survey was made to determine the total number of bearing fruit trees by kind. The information obtained from this survey is essential in the preparation of accurate estimates of fruit production.

As a means of improving the accuracy of the early estimates of apple production by varieties, average production estimates of the leading varieties for each district were computed. These district estimates for each variety will be combined into a weighted State average. Plans are to expand work on the use of objective sampling methods of estimating sour cherry production as a followup to the exploratory work that was conducted during the past year.

MINNESOTA

Developing methods of certifying nursery stock (MINN-A-1)

The program to improve the acceptance and marketability of apples, strawberries, ornamental Prunus, and other nursery stock was continued. The purpose of the project is to increase the supply of approved disease-free nursery stocks for propagation, instruct nurserymen about procedures to be followed, develop a method of issuing virus-disease-free certificates to qualifying nurserymen, and supervise actual propagating procedures. During the year emphasis was placed on the following types of activities: Investigation of causes of virus and virus-like disorders which are presently affecting both the marketing and productivity of fruit trees, in order to incorporate corrective measures into the present certification program; improvement in marketing procedures to increase certified virus-free apple tree sales and distribution; development of methods for a strawberry plant certification program; and encouraging more growers to participate and avail themselves of nursery stock certified to be virus-disease free.

Under this program checks were made on 3,400 trees at least twice during the past year for indication of the presence of viruses. Nineteen hundred of these trees were indexed twice into Prunus Tomentosa and other accepted host plants. Of the 1,900 indexed, 400 were new trees to be added to approved mother block plantings, 1,000 were rechecks, and 500 were promising new selections of hard Prunus or breeding stock material.

A great deal of effort during the past year was placed in the observation and investigation to find the cause of a "yellow leaf condition" which is causing up to a 30 percent loss for some nursery stock.

The first nursery stock developed under this project and certified under the Minnesota Department of Agriculture virus-free certification program was offered for sale during the past season. Approximately 100,000 winter hardy plums, cherries, and ornamental Prunus trees propagated from virus-free cuttings of budwood were sold to orchardists or homeowners in Minnesota and in the surrounding 5-State area.

Improving the quality of Minnesota agricultural products (MINN-A-2)

Eggs.--During the year department specialists contacted managers, foremen, and other key personnel of about 400 egg marketing firms to explain the requirements of the Minnesota Egg Law and to instruct candlers, graders, and handlers on proper candling and handling methods and grade requirements.

The department also demonstrated proper procedure for candling, grading, and handling eggs at 32 Egg Institutes sponsored by the Extension Service. Assistance was given producers and handlers in developing a State Seal of Quality program. The eggs sold under this program must meet grade and other requirements prescribed by the department.

Dairy.--Through the services of the department's mobile dairy laboratory, 56 dairy plants in Kittson, Marshall, Pennington, Polk, Red Lake, and Rosean counties were assisted in establishing uniform grading procedures and in locating and correcting conditions causing contamination and quality deterioration. The procedure followed was to take samples from incoming raw milk and from the processing lines in the plants, analyze them, report the results to plant managers, and assist the managers in eliminating sources of contamination. Followup contacts on the correction of quality problems were made when the situation warranted it. Meetings were held with participating creamery operators at which the findings of this year's dairy product quality improvement program were discussed. It is reported that this program has been of great value to the State's dairy industry.

Maple syrup.--During the past year, the department worked with many new producers on proper techniques for gathering sap, sanitation of storage tanks, care and use of storage tanks and other equipment, and proper techniques in the sanitation of bottles and containers. In addition, demonstrations and instructions were provided in standardizing and grading syrup with respect to color, clarity, and sugar content. Line checks were made in one plant as a means of locating and eliminating conditions causing contamination and quality deterioration. This program has been instrumental in the processing and marketing of uniformly high quality maple syrup in Minnesota.

Expanding market outlets for Minnesota agricultural products (MINN-B-1)

Eggs.--During the past year representatives of the department contacted all the large dealers and packers of Minnesota eggs to ascertain their interest in a marketing program that would deliver eggs at market destination grading at least 90 percent Minnesota Grade A or the USDA grade equivalent. When 22 Minnesota firms indicated an interest in such a program, letters were sent to 45 chainstores in Eastern States to inform them of the availability of quality eggs in Minnesota. As a result of this effort, six replies were received, and one large chainstore organization operating on Long Island with 142 retail outlets is now buying large quantities of quality eggs supplied by three dealers in Minnesota.

The department has worked closely with the newly formed Minnesota Egg Promotion Committee in planning egg promotion campaigns and designing displays and exhibits to promote Minnesota quality eggs. During the past year egg displays were set up at the following events:

(1) The Upper Midwest Trade Exposition held in November 1957, for hotel, restaurant, motel,summer resort, school and college cafeteria directors, and

persons engaged in institutional feeding. This exhibit booth emphasized quality eggs produced in Minnesota. Table tents and other material provided by the Poultry and Egg National Board were distributed to about 2,000 registrants at the meeting.

(2) A "Golden Egg Breakfast" was held in April 1958, to focus local and national attention on the Minnesota egg industry. The breakfast, attended by 500 people from industry and Government agencies, was covered by press, radio, and television. The industry breakfast participants packed 30 dozen eggs in a golden case which was flown to Washington and presented with a scroll to President Eisenhower by the Minnesota congressional delegation.

(3) A local bank sponsored the quality egg display booth at the Arrowhead Sportsman Trade Show held at Eveleth, Minn., during April 1958, which was visited by over 5,000 persons.

(4) A display of quality eggs was exhibited at the Retail Grocers Annual Convention in May to inform the retail food trade of the importance of designated egg grades and of holding eggs at the proper temperature in storage and display cases to maintain quality. About 1,500 grocers and other persons attending this meeting visited the exhibit.

(5) The department, in conjunction with the Egg Promotion Committee, developed and constructed a 70- by 40-foot exhibit at the 1958 State Fair which depicted the Minnesota egg industry from its beginning to the present time. The egg exhibition also included a collapsible lighted display to inform consumers, through lighted transparent photos, of the essential qualities of each grade of eggs. It is estimated that over 500,000 persons visited this exhibit at the State Fair.

(6) Funds provided by eight Minnesota poultry producers' organizations made possible the egg quality exhibit put on by the department at the Upper West Trade Show held in September 1958.

During the 1958 Lenten season, a program was launched in cooperation with the State Department of Education to encourage the use of eggs as an important item in the 4 ounces of protein food which is supplied with daily school meals. The department assisted in the distribution of information on egg dishes to school menu planners. The school officials were requested to obtain their egg supplies locally before they had entered marketing channels. Excellent cooperation from school people resulted in a marked increase in the use of eggs in meal planning. It is reported that a number of egg dealers increased their sales to schools two or three times above the normal quantity as a result of this effort.

The department in cooperation with the Minnesota Egg Promotion Committee launched a promotion program to find market outlets for small eggs during the late summer and fall months when these eggs are in plentiful supply. Marketing specialists prepared material on the promotion of Grade A small eggs for food editors, home economists, radio, television, and newspapers. Spot announcements

promoting the sale of these eggs were prepared for use by local radio stations. The emphasis of this promotional effort was within the State as most small eggs are marketed locally. It is reported that this program was instrumental in improving the marketing situation for these eggs.

A great deal of interest has been shown by producers, consumers, and the trade in the entire program to expand market outlets for quality eggs.

Poultry.-- Marketing specialists prepared material on using poultry products, especially turkey in year-round diets, for release to press, radio, and television media. The emphasis concerning the promotion of Minnesota poultry products was placed on the use of turkey broilers for barbecuing during the summer and the desirability of purchasing heavy toms and hens for deep freezer storage during the late spring and early summer when supplies are plentiful and prices favorable to consumers.

Dairy products.--During the past year the department, in cooperation with the Minnesota Dairy Industry Committee, Minnesota Creamery Operators Association, and the Minnesota Butter and Cheese Makers Association, worked on a promotion program for dairy products. Assistance was given in designing and organizing exhibits for three trade shows which featured locally manufactured cheese. Department personnel also participated in five June Dairy Month programs and in the preparation of dairy promotion material for press and radio releases.

Work was continued to maintain a high level of fluid milk consumption in schools under the National School Milk Program. School superintendents and principals were contacted to encourage them to join or expand these programs and to discuss operating problems. During the past year two dairy plants confronted with decreased volume were assisted in consolidating their operations with the result that local producers were able to retain their local market outlets.

Potatoes.--The department conducted a 2-day program for producers on sizing, packaging, carloading, and market promotion of potatoes. Producers in the Red River Valley area were helped in determining the quality and size requirements to be imposed on shipments from the area under marketing regulations.

Honey.--During the year department personnel assisted 30 retail outlets over the State in improving honey displays and merchandising methods; they also prepared honey displays at such events as the Upper Midwest Trade Shows, meetings of the Minnesota Retail Grocers Association, the Arrowhead Sportsmen's Trade Show, and the State Fair. About 250,000 persons saw the 10-day exhibit at the State Fair. Last season, Minnesota honey producers had one of the best marketing seasons since the end of sugar rationing after World War II. It is reported that this program made a significant contribution to this outcome.

Apples.--The department prepared releases on characteristics, uses, and availability of the varieties of Minnesota apples. Promotional assistance also was provided at the La Crescent Apple Festival.

Maple syrup.--The department assisted in designing a label for the maple syrup marketed by the Chippewa Indians residing at Grand Portage, Minn. The maple syrup marketing program has stressed the processing of a product of high uniform quality as a basis for developing markets.

Other agricultural products.--In recognition of the importance of many of the smaller agricultural enterprises, the department continued its market promotion program on onions, sheep and wool, charcoal, timber products, meat, rabbits, and wild rice. Promotional material was prepared for news releases, display exhibits designed and constructed for food shows, conventions, fairs, and meetings held to demonstrate and discuss grade requirements, quality factors, and packaging, which are essential to the development of a successful promotion program.

The department commenced publication of the "Marketing Messenger" in November 1957 to provide timely marketing information and publicize its promotional efforts on the purchase of Minnesota agricultural products. The publication is sent upon request to a mailing list of about 2,700 persons.

Marketing specialists attended meetings with producers, agricultural organizations, and the trade; served on committees, and assisted in drafting enabling legislation that would permit beekeepers and other commodity groups to set up marketing orders, assessment plans, and other regulations to improve the marketing of their products. The proposed marketing order legislation, which is modeled after the California act, was favorably received by Interim Committee on Agriculture of the State Legislature, and will be placed before the next session of the State Legislature which convenes on January 1, 1959.

Providing new basic data (MINN-D-1)

Calves.--Information was collected for the monthly dairy summary releases on freshening in terms of time and frequency. Such information is of value to persons concerned with the seasonal cycle in milk production and the marketing of calves.

Eggs.--Work was initiated on a survey of commercial egg producers to obtain up-to-date and comprehensive information relating to the marketing of Minnesota eggs.

The following activities were carried out relating to Minnesota crops and livestock:

Grains.--(a) Survey and publication of information on barley varieties. (b) Field investigations to obtain data for preharvest forecast, yield, and quality, and to determine actual yield at time of harvest for various Minnesota crops. (c) Assembly and publication of statistical summary for corn, featuring acreage, yield, production, price, and production practices. (d) Collection, summarization, and publication of grain stocks by geographic areas and type of storage. (e) Preparation and publication of "Minnesota Agriculture--1858-1958--Crops," a reference for those concerned with the production and marketing of crops.

Hogs.--(a) Surveys of farrowings by quarters (March 1 and September 1). This information on time of farrowing is of great help to producers in planning production and marketing; also to others concerned with processing and distribution. (b) Preparation of county series of annual estimates of sows farrowed and pigs saved, spring and fall crops for 1957. (c) Preliminary survey of the feeder pig situation to determine importance, source, and losses of pigs.

Milk.--(a) Preparation and publication of annual estimates of milk production by counties. (b) Development and publication of specific information by grades and of data on fluid consumption. (c) Survey of bulk milk storage facilities on farms.

Turkeys.--Collection and publication of data on production and breeds.

MISSISSIPPI

Improving milk quality and milk handling methods (MISS-A-1)

Producers delivering milk to 7 processing and 11 Grade A plants were given assistance in detecting and correcting conditions responsible for quality defects in their milk. This is a continuation of the line of work which has been underway in Mississippi for several years. The maintenance of high standards of quality for both manufacturing and Grade A milk is important as a means of retaining outlets. Mississippi ships large quantities of milk into other States for fluid use and the State's producers and milk plants must adhere to strict standards of quality if their milk is to continue to be acceptable in these out-of-State markets.

Greater emphasis was given during the year to the problems of producers and milk plants associated with the rapid change to the bulk tank system. This change in the method of handling milk on the farm and at the plant and in transportation has given rise to problems of grading, sampling, and weighing. Specialists of the Mississippi department helped producers and plants in developing solutions to the problems.

Improving egg quality and egg handling methods (MISS-A-2)

Through demonstrations of official grading methods and the proper methods of handling and caring for eggs, specialists of the Mississippi department helped producers, egg dealers, retailers, and restaurants in improving the quality of eggs offered to Mississippi consumers. In this work direct contact was made with over 500 commercial producers, nearly 2,500 retail store operators and managers, and about 300 restaurant operators.

Mississippi continued to approach self-sufficiency in egg production. Reports indicate that nearly 65 percent of the eggs handled by the State's

retail stores last year were locally produced. This represents a gain of 14 percent over the preceding year in the proportion which locally produced eggs made up of total retail egg sales in the State.

Improving and expanding outlets for fruits and vegetables (MISS-B-1)

The service program conducted under this project last year enabled the Mississippi vegetable industry to survive an exceedingly unfavorable growing season without substantial financial loss. The value of proper methods of grading and packing in helping to stabilize prices was amply demonstrated in numerous instances.

One phase of the program was concerned with improvement in the marketing of leafy green vegetables in southern Mississippi. A series of 32 harvesting, grading, and packing demonstrations was held in this area to assist growers in putting up a more uniform pack. In another phase of the project, marketing specialists conducted 16 watermelon grading and loading demonstrations. Specialists also were stationed at the Farmers' Market at Jackson where they showed growers delivering to that market how to do a better job of grading and packaging. This work was concerned with a volume of fruits and vegetables having a sale value of about $2.5 million.

This project was conducted in cooperation with the Extension Service, vocational agricultural teachers, manager of the Farmers' Central Market at Jackson, and the Agricultural Experiment Station.

Providing new basic data and marketing information (MISS-D-1)

Work was continued on collecting monthly data on Grade A dairies operating in Mississippi. Mail inquiries were sent to all of the approximately 3,900 Grade A dairies in the State, and from the returns, estimates of total number of milk cows in Grade A herds have been prepared. In cooperation with the Department of Agricultural Economics, Mississippi State University, county estimates are being prepared on the number of Grade A dairies, number of milk cows in Grade A dairies, total milk production, and points of delivery. These data will be used by the college in its research work on fluid milk production and marketing in the State. Results of the first year's survey are now being prepared for publication.

County estimates of number of calves born on farms during 1957 were added to the series of county estimates. This brings to six crops and six livestock items the number of commodities for which annual county estimates are now available in Mississippi. The importance of county data is shown by the fact that 95 percent or more of all requests for information are for facts on a county basis.

The expanded vegetable project was continued and served a very valuable function in providing marketing people with timely reports on the progress of vegetables, expected dates of movement, and expected volume of movement by counties or major producing areas in advance of harvest.

New work initiated during the year included a survey of farm grain storage capacity on 1,753 farms in cooperation with the Department of Agricultural Economics, Mississippi State University. The cost of the field work was largely financed by the college. Results of the survey are now being summarized and will be used by the college in its work on grain marketing problems in Mississippi. Also, pertinent facts obtained from this survey will be made available to the general public through a release. The results will provide, for the first time in Mississippi, estimates of total farm grain storage capacity according to type of structure, age of construction, and quality of storage space according to specified characteristics. Also, data will be available on grain damage by insects, rodents, and weather, methods of harvesting corn, method and equipment used in handling wet grain on farms, methods of loading and unloading grain on farms, distances to nearest market outlet for specified grain crops, maximum storage capacity used at any one time during the past three years for individual grain crops and all grain crops combined, and additional storage capacity needed on farms and amount to be constructed during 1958.

MISSOURI

Improving quality and expanding market outlets (MO-B-1)

Dairy products.--The Missouri Department of Agriculture continued to provide assistance to the creameries and cheese plants in the State in improving the quality of their products. Detailed surveys were made of plant facilities, sanitation practices, processing equipment, processing procedures, and packaging methods for 43 creameries and 40 cheese plants. These surveys were made to determine what further improvements the plants needed to make to achieve desired quality standards. These same plants were surveyed in 1956, therefore the resurvey last year provided a basis for measuring progress in correcting unsatisfactory conditions. Progress is indicated by the fact that the 1957 survey of cheese factories showed that 90 percent of the items--such as the condition of the plant, effectiveness of the quality control program with producers, sanitation in the starter, and cheesemaking and drying rooms--were satisfactory. The 1956 survey revealed that only 82 percent of these items were satisfactory. Similarly, for creameries the 1957 survey showed that 86 percent of the items were satisfactory, as against 79 percent based on the 1956 survey.

Promotional activities relating to dairy products were continued. Specialists of the Missouri department assisted in developing exhibits and floats for use at fairs and special events to promote dairy products. Assistance was given the State chapter of the American Dairy Association and local groups in planning and conducting June Dairy Month activities. Specialists worked with the California Cling Peach Advisory Board representative in securing the cooperation of dairy plants and retailers in the tie-in merchandising program for cottage cheese and cling peaches staged during the Lenten period. Plans are to place more emphasis on direct assistance to

dairy plants and retailers in improving merchandising methods and less on the more general and indirect type of promotion such as that represented by June Dairy Month activities.

Fruits and vegetables.--Progress was made in the southeastern Missouri strawberry area in improving the quality of berries going to market and in securing the adoption of better packages for shipment. The first hydrocooling of peaches in the State was started in the southeast Missouri area this past year. Continued efforts were made to improve the marketing operations of the growing commercial vegetable industry in southeastern Missouri. Progress was made despite unfavorable growing conditions and low prices due to excessive supplies in competing areas. Assistance was given grower organizations and individual growers in judging the most favorable marketing periods for the different vegetables suited to the area, in adopting proper methods of harvesting, grading, and packing, and in making market contacts. One organization was given advice and assistance in developing packing facilities and selecting grading and packing equipment. An informational bulletin relating to the availability of watermelons in southeastern Missouri was sent to about 850 watermelon buyers in Missouri and nearby States.

Under the apple promotion program being conducted by the Missouri department, the cooperation of school teachers, dentists, parents of school-age children, and health officials was again enlisted in presenting the theme to school children that good dental health and eating apples go hand in hand. The color, sound film, "Gateway to Health," developed by the National Apple Institute, was used extensively in getting this story across. The marketing specialist of the Missouri department attended the annual convention of the Missouri State Teachers Association to inform the teachers in attendance of the availability of this film and of supplementary teaching aids for stimulating the interest of their classes in better dental health. Similar activities were carried on with dentists at the Midwest Dental Congress and with parents through annual meetings of the Congress of Parents and Teachers. The specialist again visited apple buyers in the market area for Missouri apples to provide them with marketing information concerning the Missouri apple crop and to obtain their suggestions for improving the salability of Missouri apples. These visits were followed up with weekly news letters to the buyers relating to the progress of the harvest, the quality of the fruit, and availability by varieties. On these surveys made in the markets the specialist also contacted potential buyers of vegetables and obtained information regarding their requirements as to grade, variety, method of packaging, and so on, which will be of value in improving outlets for Missouri vegetables.

Livestock.--Continued assistance was given registered livestock breeders' associations in preparing and distributing brochures and directories designed to assist in finding markets for registered livestock. The Oxford sheep breeders and Landrace hog breeders were assisted in this manner during the year.

Providing new marketing information (MO-D-1)

The quarterly sow farrowing reports were continued under this project.

Developing experimental market news program for poultry (MO-D-2)

Procedures for establishing a local market news service for broilers and turkeys were tested during the year. Information on supplies, market conditions, and prices was secured daily from processors and other buyers, analyzed, and released by radio and through the press. The broiler report was issued throughout the year. However, the turkey report was issued only during the principal marketing period, September 15 to December 15.

MONTANA

Improving the quality of agricultural products (MONT-A-1)

Eggs.--The Montana egg quality improvement program involves (1) work with producers to reduce deterioration in egg quality through proper temperature and humidity control in the egg storage and grading rooms and improved grading and candling procedures, and (2) assistance to retailers in locating sources of quality eggs, installing proper refrigeration equipment for retail displays, and improving merchandising practices. Some 32 producers with about 75,000 laying hens have qualified to market eggs under the Montana "Gold Seal" program. These producers report they are receiving price premiums of 3 to 10 cents per dozen. To qualify under this program producers must follow prescribed flock management practices and comply with quality-control regulations pertaining to cooling, grading, and packing. Approximately 1,500 visits were made to retail stores in connection with the program carried on at the retailer level.

The quality improvement program for dairy products was continued in cooperation with Montana State College. Nearly 5,300 separate tests were made to evaluate the effectiveness of quality control operations in the dairy manufacturing plants in the State. For plants where the tests revealed the existence of quality problems, assistance was provided in adopting corrective measures.

Providing basic data (MONT-D-1)

The assembly and publication of information on wheat protein was initiated in 1951 and continued as a principal activity under the project during the year ended September 30, 1958. This involves the compilation of wheat production by protein percentage groups for the principal 43 wheat producing counties of Montana; also the average county percentage of protein in spring wheat and winter wheat by cropping practices.

Wheat of high protein content is used to blend with low protein wheat for various types of flour. Premiums are generally paid for protein exceeding

12 percent and are an important factor in determining the producer price. Growers of such wheat should know the amounts produced by protein percentage groups so they may exercise better judgment on where and when to market their crop. Such data is also helpful to grain dealers in locating wheat of desired protein content.

In July 1957, a start was made toward the assembly and analysis of data on Montana cattle movement from the brand inspection certificates of the Montana Livestock Commission. This work is drawing increasing interest from local and regional officials of livestock marketing agencies.

Montana ranks high in the production of range cattle for fattening in Corn Belt feedlots and in west coast States. The bulk of these cattle are marketed in September, October, and November. But feed shortages may force earlier movement during July and August and reduce the supply available for movement during the heavy marketing period. Shifts in the cattle marketing pattern caused by variable feed supplies, market demand, and other influences can be known currently through a tabulation of brand inspection data. Plans are to summarize by November 15 the October 1958 cattle movement to points outside of the State. Every effort is being made to get out monthly reports on Montana cattle movement, both interstate and intrastate. Detailed data for 1956, 1957, and 1958 are to be published in a printed bulletin in April or May 1959.

NEBRASKA

Providing additional basic data and marketing information (livestock) (NEBR-D-1)

Under this project Nebraska initiated quarterly (March and September) reports on sow farrowings and other statistics indicative of future levels of hog marketings. This brings to 10 the number of States supplementing the regular June 1 and December 1 pig crop reports with these quarterly reports. The questionnaires used in connection with the June 1 and December 1 surveys were redesigned to include the additional detail needed for the quarterly reporting program. State estimates were prepared and released on sow farrowings by months and by quarters and on intentions to farrow for the next 3- and 6-month periods. These releases also included inventory data by age groups. About 5,000 copies of each quarterly release were distributed to hog producers and other interested parties.

The Nebraska Crop and Livestock Reporting Service furnished information from these quarterly surveys to the Crop Reporting Board, Agricultural Marketing Service, for issuance of a consolidated 10-State report.

The September 1958 survey included questions relating to the breed of hogs on farms. This information is desired to furnish an indication of the shifts taking place in the different breeds.

Expanding outlets for poultry, eggs, fruits and vegetables (NJ-B-1)

Poultry and eggs.--Under this project marketing specialists of the New Jersey Division of Markets are implementing the program of the New Jersey Poultry Products Promotion Council to expand outlets for New Jersey poultry and eggs. These specialists, in cooperation with the Agricultural Extension Service, conducted an intensive quality improvement program at the farm level involving nearly 3,000 farm visits and about 700 on-farm egg quality surveys. Intensive egg quality improvement work also was done with the 51 egg distributors licensed under the New Jersey Seal of Quality program. Activities also were initiated to improve the wholesaling and retailing of eggs and poultry.

Assistance was given the council in planning the promotional phase of its program, including recommendations concerning the conduct of a consumer survey and the design and content of promotional material. The rapid decline in the importance of live poultry markets in metropolitan areas is forcing New Jersey poultry producers to change their marketing methods. The New Jersey Division of Markets is assisting the poultry industry in approaching this problem in an organized way. Specialists of the division helped in forming the New Jersey Poultry Meat Growers Association and a marketing agency to market specialized types of poultry.

Additional services provided the poultry industry by division specialists included a survey of outlets to determine buyer preferences and requirements for dressed specialty poultry such as roasters and caponetts, assistance in securing processing facilities, in developing methods for identification of individual birds, in designing shipping containers, and in developing standards for State Seal of Quality poultry.

Fruits and vegetables.--In preparation for operation of a State Seal of Quality program during the 1958 marketing season for New Jersey Irish potatoes, specialists of the Division of Markets conducted an intensive campaign to inform producers and shippers of the need for better care in grading, handling, packaging, and quality identification. Simultaneously with these activities, the division cooperated with the New Jersey White Potato Industry Council in planning the Seal of Quality program for the 1958 crop. In helping to plan this program, specialists drew on the experience of other States where similar programs have been in operation. After the detailed provisions of the program were formulated, contacts were made with buyers for chainstores and other consumer outlets to explain the program and to enlist their cooperation.

While the program had just been put in operation at the time of this report, results during the early part of the marketing season indicate that it will measurably improve the acceptance of New Jersey potatoes. Several outlets which had discontinued the use of New Jersey potatoes resumed buying after a trial purchase. Other outlets in this category agreed to make trial purchases after existing contracts had expired. One of these outlets had

featured State Seal of Quality New Jersey eggs, and the favorable experience it had with this program induced it to resume the handling of New Jersey potatoes.

The New Jersey Division of Markets provided assistance to the council in developing point-of-sale material for use in retail stores and publicity programs for use by radio and television stations. Free time was given by these stations in presenting these programs. Paid advertising was placed in trade and consumer publications by the council but none of these expenses were charged to this project.

Roadside markets have long been an important outlet for New Jersey fruits and vegetables and various other products. Their numbers and the size of operations have been growing in recent years. However, the potentialities of this method of marketing are far from being fully realized because of poor location of many of the markets, unattractive displays, and uncertainty of consumers about the quality and freshness of the products offered and the reasonableness of prices.

In an effort to improve these roadside outlets, the New Jersey Division of Markets, in cooperation with the College of Agriculture, New Jersey Farm Bureau, and representative roadside market operators, developed a plan under which markets complying with certain requirements as to cleanliness of facilities, advertising of products, grading, packaging, displaying, and pricing of products, would qualify as a New Jersey Certified Market. The details of this plan were presented to roadside market operators at a series of meetings last winter. These activities resulted in the formation of the Jersey Certified Farm Markets, Inc. This organization adopted requirements for membership in line with those recommended by the planning group referred to above. A total of 35 markets, with an average annual sales volume of about $30,000 each, operated as members of this organization during the year. Marketing specialists of the New Jersey Division of Markets provided continuous assistance to this group during the marketing season by showing the operators how to grade, package, display, advertise, and price products in accordance with requirements of the organization.

The benefits from the roadside market program have been gratifying, and requests for additional memberships greatly exceed the present resources of the Division of Markets to maintain the necessary contact work. This program has received extensive free publicity in newspapers, magazines, and over the air. A leading metropolitan newspaper in the area had this to say editorially about the program: "If an idea being tried out in New Jersey is a success, motorists will be asking themselves fewer questions when tempted to stop at a roadside fruit or vegetable stand. As it is, they often wonder whether the stuff is fresh, whether its quality is good, and if the stand proprietor grew it himself."

Providing basic data and new marketing information (NJ-D-1)

A revised comprehensive publication on the statistics of New Jersey agriculture was issued during the year. Data from the 1957 apple and peach

tree survey have been analyzed preparatory to the issuance of a detailed report. A mimeographed summary of State totals of apple and peach trees by age and variety was released during the year. This report reflected changes in numbers and ages since the 1957 survey, based on a resurvey made by mail in May 1958. A similar resurvey was made of the blueberry industry to furnish a more reliable basis for the 1957 estimates of acreage, production, and utilization. The last complete enumerative survey of this industry covered the 1955 crop.

Field work was completed on an enumerative survey of all commercial flower and plant growers in the State. In this survey, data were obtained on the quantities and values of wholesale and retail sales in 1957 for the principal kinds of cut flowers, flowering and foliage plants, and bulbs. An enumerative survey also was completed of all producers of meat chickens in the State. Breed, sex, weight, age, market class, method of sale, and price were the items covered in this survey. The data have been summarized for publication.

Publication of the weekly New Jersey Truck Crop News report was continued. This report carried information with respect to crop development and expected harvest dates.

The publication program was expanded to include more detailed monthly reports in season for vegetables, potatoes and fruit, also annual summaries, including county estimates, for poultry, dairy products, and livestock.

The service program providing vegetable growers and marketing agencies with county-point price information was expanded during the year. This action was taken following two seasons of reporting f.o.b. storage prices of New Jersey sweetpotatoes and one season of reporting Christmas tree prices. The start was made with asparagus using the then existing personnel, but the demand for coverage of the full range of fruits and vegetables was such that additional personnel was required. Dissemination of the expanded reports was obtained through the wire services for radio stations and newspapers in New Jersey. The USDA Market News Service is cooperating in disseminating the daily reports for use in terminal markets and in other shipping areas.

NEW MEXICO

Maintaining the quality of farm products (eggs and fruits and vegetables) (NM-A-1)

Work was initiated during the year with producers and retailers to improve the facilities for refrigerating and displaying eggs, and to encourage the adoption of better handling practices and the use of official grades in buying and selling. One area in eastern New Mexico, where buying eggs as current receipts had long been the practice, is changing over to a grade-price method of purchase. This change in method has stimulated producers to pay greater

attention to quality with the result that their incomes have been increased by several thousands of dollars per month. Buying by grade also has been established in other areas due to the activities under this project. Price increases of up to 15 cents per dozen were noted in some of these areas following this change in buying method.

Assistance was given several groups of fruit and vegetable producers in acquiring proper facilities for the grading and handling of their products preparatory to shipment.

Expanding market outlets for fruits, vegetables and poultry (NM-B-1)

Specialists of the New Mexico Department of Agriculture prepared and distributed to approximately 3,000 brokers, distributors, and chain store buyers a buyer's guide showing amounts and specific locations of production, varieties, and marketing seasons of the different fruits and vegetables grown in New Mexico. The distribution of this brochure elicited numerous requests from buyers for further information about the availability of products. Several excellent contacts for the distribution of New Mexico fruits and vegetables were made in this way.

In New Mexico, a major problem in expanding outlets for fruits and vegetables has been the lack of brokerage firms large enough to serve Midwestern and Eastern markets. The New Mexico department was instrumental in getting one of the leading firms to come into the State and handle the harvesting and marketing of lettuce in one of the newer areas. It is estimated that producers in the area received an additional income of $50,000 through this arrangement.

Work was initiated with the railroads serving the fruit and vegetable areas to secure more favorable rates, to improve service in providing cars and delivery schedules, and the spotting of cars near the lettuce vacuum cooling tubes.

In connection with poultry, one bothersome problem has been the inadequacy of outlets for cull layers. The New Mexico department helped solve this problem in one area by securing an outlet through a dressing plant and a retail chain for a specified volume each week.

NEW YORK

Providing marketing information and expanding market outlets for New York agricultural products (NY-B-1)

Poultry and eggs.--It is estimated that nearly 200,000 persons observed the egg exhibit placed at the New York State Fair by the New York Department of Agriculture and Markets to explain and demonstrate the official grades of eggs, grading and candling procedures, broken out egg quality, and the operation of the New York State Egg Law. Demonstrations to consumers regarding the most important factors in selecting top quality ready-to-cook chicken

and turkey also were given at the exhibit. Discussions with consumers observing the demonstrations provided guides to the selection of material to be used for consumer information programs and news media. The Consumer Council to the Governor cooperated in these demonstrations. A leaflet, "Know the Poultry You Buy--Get Your Money's Worth," prepared by the department for the Consumers' Council, was distributed in connection with the demonstrations. Nearly 5,000 consumers requested copies of it.

In further efforts to expand outlets for eggs, department representatives explained to egg buyers the merits of the official grading and Empire State Trademark programs and assisted them in locating sources of high quality eggs. In one case this work resulted in increased sales of several hundred cases of cartoned eggs per week. Information about egg quality, grades, sizes, uses, methods of preparation, and the Empire State Trademark program was presented before various consumer groups and over a series of public service television programs.

The egg promotion program was backed up by an intensified effort to improve the handling and care of eggs so as to retain quality. For example, the department cosponsored seven regional egg-grading schools at which proper egg candling, grading, and handling procedures were demonstrated to approximately 400 producers. Individual assistance in overcoming egg quality problems was given producers, grading plants, wholesalers, and retailers.

As a phase of the Empire State Trademark program, quality retention tests were conducted on a number of deliveries to retail stores. The aim here was to determine the minimum quality necessary at time of packing to insure a reasonable period of quality retention at the store level. The tests show that eggs packed at 75 to 80 percent AA quality will drop to 65 to 70 percent AA quality in approximately 90 hours. Eggs in these tests were transported up to 60 miles in insulated trucks, stored in coolers at the retail store, and displayed in a refrigerated showcase.

The department completed the first year of an experimental market news program for eggs. Price and volume and other marketing information pertaining to eggs were collected each Tuesday and Thursday from egg dealers in the three major egg producing areas who account for a large share of New York State eggs. The consolidated report was disseminated from the Albany office of the New York department through the United Press International and Associated Press to newspapers, radio, and TV stations over the State. The report also was furnished the Agricultural Marketing Service office in New York City which carried it in the Tuesday and Thursday issues of the Dairy and Poultry Market News Report. Since this experimental country point price report was initiated, there has been an improvement in prices received by New York State producers relative to quotations on the New York Mercantile Exchange, particularly for large whites.

Cheese.--The department cooperated again with the New York State Cheese Manufacturers Association and Cornell Agricultural College in planning and maintaining a cheese promotion exhibit at the New York State Fair. This exhibit featured the various steps in manufacturing New York cheddar cheese.

Work was continued with the cheese plants in developing standards of quality for cheese to be marketed under the Empire State Trademark.

Potatoes.--Before the reactivation and improvement of the trademark program in 1957, there had been practically no commercial washing of potatoes on Long Island. Based on past experiences, shippers felt that washing was impractical and that the trade preferred unwashed Long Island potatoes. Observations of marketing specialists in the markets and contacts with the trade indicated, however, a definite trend and preference for washed potatoes. Close studies of washing operations and equipment in other areas seemed to discredit the Long Island objections to washing. This information, when presented to Long Island shippers, provided the stimulus for two shippers to begin washing operations in the fall of 1957. The success of these initial ventures can be best shown by the fact that 9 potato washers were in operation for the beginning of the 1958 season with reports of 8 or 10 more in prospect before the end of the season.

The trademark program also was reactivated last year in upstate potato areas. A number of shippers have indicated interest in the program and plans are being made for the participation of several large producers. An important phase of the program has been the work with retailers on in-store promotion activities.

The New York department, in cooperation with the Long Island potato industry, put on a major promotional and educational potato exhibit at the 1958 Mineola Fair and Industrial Exposition held in Westbury, N.Y., September 6 to 16. Nearly 25,000 visitors observed the exhibit and about 10,000 persons participated in a potato grading contest where 2,000 winners were each presented a 5-pound bag of Red Label potatoes. The Long Island Agricultural Coordinating Committee purchased the exhibit space and furnished the potatoes awarded the contest winners.

Apples.--In cooperation with the apple industry, in an effort to expand market outlets, a brochure was developed for the Hudson and Champlain Valley growers and one for the western New York apple growers. Department personnel also carried on market service work at wholesale and retail levels.

The brochure prepared for the Hudson-Champlain valleys contained a map showing production by counties, location of regular storages, and those with controlled-atmosphere rooms. It also listed the varieties available and described the New York State controlled-atmosphere law and branding requirements for apples. The brochure prepared for western New York apple growers also listed production by counties, location of storages, and varieties of apples available, but in addition gave information on apple products processed in western New York.

Both brochures were sent to over 1,200 truckers, food brokers, and apple buyers located in the Atlantic Coast States from Florida to Maine. These brochures also were sent to apple packers and county agricultural agents for

their use. A total of 4,500 brochures were distributed. To give the brochures wider publicity, an article discussing them was sent to 20 periodicals, 125 daily and 400 weekly newspapers, and a number of newspaper editors. One radio talk regarding controlled-atmosphere apples was given over Station WGY in Schenectady. Department personnel also presented two 15-minute public service TV programs on apples over station WGR-TV, Buffalo.

The department cooperated with the Western New York Apple Growers Association in an attractive apple exhibit at the 1958 State Fair. This exhibit was set up to simulate a theatre. Its colorful and brilliant marquee advertised to thousands of fair-goers the name of the educational and promotional apple film that was being shown. Similar exhibits were maintained at several county fairs.

Marketing service work to promote better handling and merchandising techniques for apples was conducted at wholesale and retail agencies in western New York. Although it was found that many retailers were reluctant to change their merchandising methods, progress was made in a number of instances. Efforts of the department's specialists have resulted in a better acceptance of merchandising methods and a greater movement of apples to consumers. Demonstrations were given of the advantages of separating apples into the different qualities and pricing them accordingly. This procedure results in less handling and bruising of the apples by shoppers.

Vegetables.--A comprehensive marketing information program was initiated for sweet corn grown in the Hudson Valley and Rochester areas. Detailed plans for the program were developed with producers and marketing agencies at a series of meetings prior to the marketing season. Information relating to quality, prices, method of packaging and cooling, supplies, movement, and demand at both production area and terminal markets was assembled daily and disseminated by radio in the major sweet corn growing areas. This method of dissemination was supplemented by a daily report issued at Albany and sent to producers, county agricultural agents, brokers, and dealers.

The marketing information program for onions was expanded to include all four of the major producing areas--Orange County, Oswego County, Elba, and Canastota. Data on quality, grade, size, type of packaging, and prices were obtained from growers and shippers each Tuesday and Thursday during the marketing season and disseminated to the United Press, New York City Mercantile Exchange, Trans-Lux Produce News Corporation, and other news media. The data also were carried in the weekly crop reports issued by the New York department from its Newberg and Rochester offices.

A new daily marketing information report was issued from the department's Rochester office providing data on supplies, prices, and demand for vegetable crops shipped out of the production areas. Crops and areas included were: Iceberg lettuce from Elba, Prattsburg, and Oswego; table and pickle stock cucumbers from the Rochester area; sweet corn from the Rochester and Hudson Valley areas.

Sales of about 2¼ million bushels of apples from the Hudson, Champlain, and Mohawk Valley areas were reported by growers and shippers to the New York department to form the basis of the department's marketing information releases during the 1957-58 marketing season. The weekly f.o.b. farm storage and country point market report developed from this information was released to over 300 persons and agencies, including growers, buyers, storage operators, county agents, colleges of agriculture, the National Apple Institute, Produce News, New England Apple Institute, and Western New York Apple Institute. These agencies reciprocated by furnishing apple marketing information which was included in the weekly report. This service has helped to establish more orderly marketing conditions for apples in these areas, provide an incentive for improvement in the grade and pack, and increase grower returns.

Christmas trees.--The Christmas tree industry in New York State is rapidly growing out of the wood lot and into the plantation. Small lots of trees cut for thinning from reforested farm lots and areas of natural growth trees are no longer the principal source of local Christmas trees. Now large acreages of marginal land bought and planted to selected nursery seedlings are taking their place. The industry is becoming quality conscious and is competing favorably with imported trees. Inspection, grading, and tagging of trees is becoming more prevalent. With this transformation have come the usual marketing problems. The Scotch pine, well suited for New York State production, is becoming increasingly popular in all upstate markets and is gradually breaking into the once solid balsam market of New York City. Through the f.o.b. marketing information report and other correlated efforts, the department is aiding the industry with these problems.

The f.o.b. report, which was continued, included price information by varieties on stump, cut, and cut and bundled, also quality factors such as freshness, color, shape, and injury. The report covers the entire State, and over 571 producers cooperated in providing the needed information. It is issued to these cooperators and to over 240 other interested parties and agencies, such as county agents, buyers, and various colleges of forestry in this State as well as neighboring States and Canada. In 1957 the reports were based on actual sales of over 160,000 trees, and producers cooperating represented approximately 70 percent of the more than one-half million trees sold.

The department cooperated with producers, the New York State Christmas Tree Association, and the College of Forestry in an effort to promote sales. Articles were prepared by department specialists pointing out the advantages of marketing a quality product. The department also acted as a clearing house by passing along buyer inquiries to producers. The reporting of prices by grades was studied during the year and plans are to report on this basis next year. This should promote quality improvement. Many letters have been received commenting on the value of this service. Comments and observations made by producers and buyers indicate that information supplied by the department has taken some of the guesswork out of marketing this highly specialized product.

At the summer meeting of the New York State Christmas Tree Growers' Association, attended by over 200 members, the new Christmas tree grades

were discussed and demonstrated. It was indicated at this meeting that more growers will sell trees on a graded basis this coming marketing season. Also discussed was the use of the Empire State label and how growers interested in selling trees under this label could participate in the program.

Maple products.--About 435 producers cooperated with the New York department last season by furnishing information on the production, marketing, and pricing of maple products. This information was analyzed and reported weekly. The report assisted producers in selling to advantage and buyers in locating supplies.

New York ranks next to Vermont in the production of maple products. Heavy snow and extreme cold hampered producers last season and production was down to 400,000 gallons, a drop of about 20 percent from the preceding season. The trend in production, however, is upward.

The department is assisting the various maple products associations and marketing agencies in promoting maple products. Help was given in developing an attractive retail package and in making arrangements for several large retailers to merchandise maple syrup.

Improving marketing efficiency (NY-C-1)

With the trend toward volume operations and closer working margins, it has become increasingly necessary for marketing and retailing organizations to improve operating efficiency through the application of better methods and facilities developed by research. The New York department is being called upon for more and more assistance in this field. In order to meet this demand personnel have attended produce clinics and are now carrying on projects in retail stores and giving assistance to producers, processors, handlers, and others.

Projects are now in progress with two corporate chains. In each chain, a representative store was selected. After careful study was made of the backroom layouts, facilities, and operations, detailed recommendations and improvements needed for a more efficient operation were presented to the central office. These recommendations included scale drawings and measurements that could be readily analyzed. Management was quick to approve the suggested changes so that it was possible to begin making structural and facility changes at once.

Progress in these projects has moved slowly because it is imperative that recommended changes be carefully developed, and that company personnel, from the top executive to the clerk in the retail store, be sold on the program. Personnel assigned to such projects must sell themselves to the people they are working with. Another prolonging aspect concerns the fact that work is frequently interrupted due to its conflict with store operations, holidays, seasonal peaks, vacations and other personnel commitments. And finally, employees must be taught the new methods and how to use the new facilities and operational techniques.

The philosophy behind constructing a central demonstration is to give other personnel in the firm a chance to study and observe so they may make similar changes in other stores. Plans are already underway by each chain to adopt these methods and changes in additional outlets.

At the request of several retail chain organizations, assistance was given to a number of growers in setting up more efficient apple grading and packing facilities. Division personnel made a statewide survey of existing equipment and facilities in order to advise apple producers and packers on equipment and techniques to perform the best job.

The New York department is cooperating with the Transportation and Facilities Branch, Agricultural Marketing Service, in testing a new mechanical grading and packing assembly line and facilities designed to handle McIntosh and other easily bruised varieties.

The work to standardize the packaging of fruits and vegetables was continued. The objectives are to reduce the number of recommended packages to a minimum and to induce producers to restrict the containers used to this list. Cantaloup producers in the Rochester area made some progress along this line last year. Many of them adopted a nailed type of cantaloup crate. This was the first step taken in many years by cantaloup growers in the State toward a uniform package.

Sweet corn producers in one county adopted a wirebound crate for sweet corn precooled and sold through the Genessee Valley Regional Market. Cucumber producers in this area also adopted the bushel basket and the corrugated fiberboard carton for shipments out of the area.

Work was done toward developing a fiber box for grapes similar to that used for strawberries. Tests were made on one such container during the year.

Providing new basic data (NY-D-1)

Fruit.--Considerable emphasis this past year was directed toward improving statistical data for New York fruit crops. Under a fruit tree survey which is underway, information is being obtained on the number of fruit trees by age and variety from all commercial orchards in the State. The results of the survey will provide data for preharvest fruit variety forecasts which are widely used by growers and buyers in making marketing decisions. Work was initiated to develop objective sampling methods for use in improving production estimates.

All grape processors and wineries in New York State were contacted last year to obtain data on the tonnage of grapes by varieties purchased from growers for processing in each of the four major producing areas of New York, as well as the tonnage brought into the State for processing. A report issued in February 1958 was distributed to all cooperating processors, as well as others interested in the New York grape industry. This basic information is essential for intelligent decisions regarding new plantings and the size and location of new processing facilities.

Potatoes.--Urbanization on Long Island and changes in production and marketing technology have brought about marked changes in the potato industry in that area in recent years. The lack of precise data concerning these changes has compounded the problem of providing the industry with reliable estimates of production and stocks and has made it difficult for the industry to develop and agree upon a unified approach to the solution of its marketing problems. At the industry's request, the department conducted a survey to provide this needed basic information which included such items as irrigated and nonirrigated acreage, sources of seed potatoes and type of seed (certified or noncertified), farm potato storage capacity, acreage harvested by different methods, and the marketing practices used by growers.

Vegetables.--A survey was made to obtain accurate information on vegetable acreages in the muckland areas of Orange, Elba, Oswego, Madison, and Wayne Counties. From this survey a report on lettuce acreage in the Oswego area was issued and made available to producers, buyers, and other interested persons. This report indicated that about 1,600 acres were planted in the area by the middle of June 1958 compared with 200 acres planted after that time. The information on the late lettuce acreage indicated that plantings were substantially less extensive than many observers had believed.

Dairy.--Marketing data were again compiled on milk supplies and utilization in 12 major upstate milk marketing areas not covered by separate marketing orders. These data included milk receipts from dealers' own herds, from other plants, and from producers, and supplement regular available dairy statistics for New York on milk supplies and utilization. This information will be published in the near future and will provide indications of any changes occurring in marketing trends among local markets.

NORTH CAROLINA

Testing cotton fibers (NC-B-1)

Under this project samples of cotton were obtained each week from gins in 27 different sections of the cotton-growing area and tested for fiber properties such as maturity, uniformity of fiber length, tensile strength, and diameter variability. The test results were released on alternate Fridays to cotton merchants, mills, and shippers. This service, which has been provided since 1951, facilitates the channeling of North Carolina cotton to its best end use and application of the data often prevents or alleviates problems in the cotton mills.

Improving marketing practices and expanding outlets (NC-B-2)

Fruits and vegetables.--The four fruit and vegetable marketing specialists assigned to this phase of the project continued to provide assistance to numerous producers, producer groups, and shippers in connection with such problems as the selection of varieties having the best market potential,

determination of the most advantageous marketing period or periods, harvesting, grading, and packing procedures for best marketing results, selection, installation and operation of grading and packing equipment, and finding outlets. The scope of their work is indicated by the following account of activities: Sixty fruit and vegetable marketing conferences on major problems and policies of fruit and vegetable industry groups, attended by about 550 producers recognized as leaders in their respective communities; 126 demonstrational meetings relating to harvesting and grading procedures with over 1,500 producers; 250 on-farm demonstrations of proper harvesting, grading, and packing methods; assistance to nearly 1,800 producers with regard to individual marketing problems; and assistance to 13 groups in establishing and equipping facilities for marketing fruits and vegetables.

The work done in the Bertie County area is typical of the assistance being given producer groups in improving marketing of their fruit and vegetable crops. At the request of producers in that area, the specialists helped in developing a program designed to insure successful marketing of watermelons and sweetpotatoes, two crops being expanded to replace cotton and tobacco as the result of acreage restrictions on the latter. In addition to assisting in perfecting the organization under which these crops will be marketed, the department gave advice regarding varieties having the best market acceptance, choice of market outlets, advantageous marketing periods, and proper design and construction of needed sweetpotato curing and storage facilities. This year some 600 acres of watermelons and 500 acres of sweetpotatoes are being marketed under a unified plan where the emphasis is on strict quality control and proper handling, from seed selection to delivery of the product on the buyer's platform.

Livestock.--The work in livestock marketing was concentrated on developing a program of selling livestock by grade and creating a marketing structure for live animals which will implement the pricemaking forces in the market. These two objectives are to some extent complementary in nature. Special sales, organized by specialists of the North Carolina department in cooperation with the Extension Service, were utilized as a means of dramatizing the value of selling by grade and of improving the pricing process. As an outgrowth of the previous demonstrational work showing the value of selling slaughter hogs by grade, a live-hog grading program was started during the year at six markets in the State.

Activities to improve the marketing of hogs have been extended to feeder pigs. Assistance was given one auction market in establishing a regular market for feeder pigs of prescribed quality requirements; the market has benefited both sellers and buyers.

As in recent past years, special sales for feeder calves, yearlings, and fat cattle were organized and conducted. A similar program was carried on for fat lambs. Aid was again given in conducting the various wool pools which have been established over the State.

In an effort to acquaint consumers with the various grades of meat and demonstrate to producers the importance of selling animals by grade, the department, in cooperation with North Carolina State College, prepared and displayed an exhibit of meat grades at the State Fair.

Poultry and eggs.--The department continued to provide services to egg producers, handlers, and retailers in maintaining egg quality and improving methods of grading, storing, displaying, and merchandising eggs. Meetings were held with several producer groups to explain the importance of proper care of eggs at the farm level, and how to candle, size, and pack eggs to conform to official standards. Egg grading clinics attended by about 200 producers, packers, and retailers also were held in 18 counties. These clinics provided an opportunity for intensive training in egg grading methods and other aspects of egg marketing. Assistance was given about 30 egg marketing firms in resolving particular problems. Increased attention was given to the problems of poultry processors wishing to qualify under the National Poultry Products Inspection Act. Twenty-three plants were helped in building new facilities or to remodel and re-equip existing facilities to comply with the requirements of this act.

Programs designed to promote increased consumption of eggs and poultry were given over several radio stations in the State.

Tobacco.--This phase of the project has two objectives: (1) To assist growers in evaluating prior to planting time the prospective relative demands for the different grades of tobacco, and (2) to assist growers in sorting and packing their tobacco to realize maximum returns.

In attempting to realize the first of the objectives, specialists follow closely the statistical picture on tobacco and keep in constant touch with buying interests, both domestic and foreign, to keep informed on prospective demands and quality needs. They analyze the information from these sources and present the material to producers at outlook meetings ahead of the planting season. Another means of informing producers regarding developments in the supply and demand situation is through issuance of a monthly tobacco warehouse sales report and an annual summary of tobacco statistics.

The work to improve grading and sorting was carried on primarily through demonstrations of proper methods of performing the operations at the farm and tobacco warehouse. During the year such demonstrations were conducted in 26 of the flue-cured and 8 of the burley tobacco counties. A total of nearly 1,400 farmers benefited from this work. In many instances producers were able to increase the grade value of particular lots by 6 to 8 cents per pound.

Dairy.--The primary aim of this program is to increase the per capita consumption of milk in the State. Efforts of the dairy marketing specialist to this end are directed toward children of elementary and high school age. He visited over 100 schools in the State to assist in the establishment and expansion of School Lunch and Special Milk Programs and to present discussions

before students, teachers, and parents on the importance of milk in the diet. About 33,000 persons attended these discussion groups. Milk consumption in North Carolina schools under these programs reached approximately 120 million half pints in the 1957-58 school year, compared with about 72 million half pints in 1953-54, before the Special Milk Program.

The dairy marketing specialist participated as a member of the North Carolina Dairy Industry Promotion Committee in helping to plan various promotion activities, such as June Dairy Month, and assisted local leaders in conducting community activities designed to promote greater use of milk and other dairy products.

Improving efficiency of packing and processing facilities and equipment (NC-C-1)

Activities under this project were expanded to include assistance to feed manufacturers, seed processors, and livestock slaughtering plants. Feed milling is undergoing considerable expansion in North Carolina. Many of the feed manufacturers are in the process of increasing milling capacity and need help in designing or redesigning facilities, and equipment layouts for most efficient operations. The work done with several feed mills this past year indicates that this phase of the project needs considerable expansion. The production and processing of seed also are growing rapidly in the State. The engineering assistance being provided seed processors is coordinated with the activities being carried on under project NC-C-2. Assistance to meat packing plants in improving the efficiency of plant operations was initiated during the year. There are more than 100 meat slaughtering and packing plants in the State. Many of these installations cannot be expanded to handle the increasing volume of livestock being produced without a complete redesign of the facilities and equipment layout.

The established line of work to improve the efficiency of cotton gins was continued, with 406 visits to about 300 gins to assist in the installation of lint cleaners and in the adjustment of ginning equipment to prevent damage to the fiber during the ginning process. The gin specialists cooperated with the American Cotton Manufacturers' Institute in evaluating the effects of excessive temperatures in cotton drying on the quality of ginning and the ginned cotton.

Field work with corn mills was continued to observe mill operations and to demonstrate how to adjust and maintain the different machines and other equipment used in corn milling. Continued assistance was given these mills on problems of securing corn suitable for milling purposes and on the design and construction of proper storage facilities.

Improving facilities and methods for handling grain (NC-C-2)

Lack of adequate storage facilities forces grain moved from the State at harvest time to be brought back or replaced as whole grain or mixed feeds later in the grain marketing year. Activities of the North Carolina department are directed toward providing adequate storage to remove the necessity

for this extra handling and transportation. The need for more storage and other grain marketing facilities within the State also is increasing by reason of expanding grain and soybean production and a growing livestock and poultry population.

Margins on merchandising grain in North Carolina are being reduced each year; therefore, it is imperative that new facilities be as efficient as possible. In promoting the improvement and expansion of grain storage and marketing facilities throughout the State and assisting grain handlers, elevator operators, and processors in efficient methods of handling, storing, drying, grading, and merchandising grain, efforts were centered around (1) conducting surveys to determine where best to locate new grain marketing facilities; (2) providing assistance to elevator operators, processors, and individuals in planning new facilities, securing financing, and establishing operating procedures; (3) expanding market outlets through more processing of feed, soybean processing plants, and export facilities; (4) bringing about a better understanding among operators at grain marketing points with respect to inspection and grading of grain according to official standards; (5) cooperating with county, State, and Federal agencies as well as with producers and trade associations in solving problems.

To determine the need by areas for expanding grain marketing facilities in North Carolina, four surveys were made. These included information on grain production; grain available for market; grain storage and marketing facilities; price comparisons with the Agricultural Stabilization Committee or Commodity Credit Loan prices; possible benefits to the producers in the area; estimated cost of construction; estimated operating cost and an estimate of income.

Following these surveys, specialists met with groups and individuals who were interested in constructing grain storage and marketing facilities to discuss and analyze the survey information to determine the need for grain storage and marketing facilities, to discuss financing, and to point out the potentialities of the grain business in North Carolina. In addition to these meetings, specialists held 285 conferences with 625 people attending to discuss similar problems in building and planning facilities, financing the building, operation of facilities, and marketing conditions for grain and grain products.

Results of this work to expand and increase the efficiency of grain storage and marketing facilities have been gratifying. New storage and marketing facilities for over 1 million bushels of grain were added by 21 firms. Two firms converted to the solvent method for extracting oil from soybeans which will enable them to secure an additional oil yield of about 4 percent. This will improve their competitive position in the local market and is expected to raise prices received by producers.

Even though considerable progress has been made in merchandising grain on the basis of grade and quality, specialists continued to give assistance

to 366 grain dealers and elevator operators during the past year with grading techniques in accordance with official standards. This assistance has been extremely valuable to the grain merchandiser and to the producer. With the standards as a basis for buying and selling, producers will be paid for the quality delivered to market and the grain handler can do a better job of merchandising to feed mills and export markets.

In addition to the assistance given individual firms in grain grading and merchandising on grade and quality, eight group meetings were conducted in which grain grading and the use of grading equipment were demonstrated. In further expanding marketing services to grain dealers, handlers, and processors in North Carolina, 12 news articles were prepared providing current information and pointing out changes as related to the grain industry. Six radio programs on merchandising grain on grade and quality, present market trends and conditions, early harvest, and grain prices were prepared and delivered.

Specialists continued to promote the establishment of a grain export facility in Morehead City, N.C. Contracts have been signed by the Ports Authority for a grain firm to begin operating in Morehead City during the 1958-59 harvest season. The existing facility has been expanded and improved to handle grain more efficiently from trucks and cars for ship loading. This will give North Carolina producers and grain handlers a third export market. These developments will help further to link local markets in North Carolina to worldwide markets for grain.

Following the 1957 National Marketing Service Workshop, specialists developed, in cooperation with other State agencies, a new "Seed Service and Marketing Program." The objectives of this program are to (1) assist seed processors in improving seed quality by helping them determine the proper procedures, equipment, and methods to follow in their specific seed cleaning operations, (2) enable processors to improve operating efficiency and lower processing costs by showing them how to design the facilities, place the equipment layouts, and adopt the work methods best adapted to their individual situations, (3) acquaint seed cleaning machinery manufacturers with seed quality problems and assist them in designing more effective equipment, (4) encourage producers and processors to adopt proper equipment and methods for conditioning, storing, and treating seed to maintain an improved quality. It is felt that this seed service and marketing program will be a long-term benefit for producers throughout the State.

Providing new basic data (NC-D-1)

A survey of sample areas was completed during the year to serve as a basis for estimating the numbers of apple and peach trees by ages, varieties, and counties and to relate yields to variations in orchard practices. The results of this survey are to be published shortly.

Improving the quality of milk and dairy products (ND-A-1)

The North Dakota Department of Agriculture continued its program to maintain and improve the quality of dairy products by working with 1,955 dairy farms, 308 cream stations, and 107 processing plants during the past year. Under this program specialists contacted milk producers and plants to outline the requirements in obtaining Grade A rating for these operations. As of September 30, 1958, a total of 171 farms and 35 pasteurization plants have qualified for Grade A rating in 35 milk sheds, an increase of 30 sheds over a year ago.

Representatives of the department also worked with producers and processors in correcting conditions responsible for poor quality. For example, since the new dairy laboratory was completed on January 1, 1958, 739 samples of raw milk and 668 samples of pasteurized milk direct from dairy plants have been analyzed. Eighty-six notices were mailed to distributors where temperatures in storages and display cases were found too high for good quality maintenance.

The program stimulated producers and distributors to make many improvements in facilities and equipment designed to improve product quality. For example, assistance was provided producers in installing 59 new and remodeling 108 existing milk houses, improving lighting and ventilation in over 100 milk houses, and installing about 100 milk coolers and an equivalent number of water heaters. Many miscellaneous installations, such as wash vats, can racks, doors, windows, screens, and cabinets, were added to improve existing facilities. In addition, 18 new barns were built and several others remodeled, wells and sewage systems were installed or repaired, and improvements in drainage and yard facilities were completed during the year.

The service work with the pasteurization plants influenced the installation of 22 bottlers and walk-in coolers, 5 new pasteurization rooms, and new sanitary piping and waste disposal, as well as the installation of newer types of equipment and facilities to improve the efficiency of the plant operation and to obtain a high degree of quality control.

It is reported that this program had a beneficial effect upon the quality of 54 million pounds of butter, 144 million pounds of manufacturing and bottling milk, and $2\frac{1}{2}$ million gallons of ice cream marketed in North Dakota during the past year.

Preventing deterioration and contamination of grain in storage (ND-A-2)

The service work on preventing the deterioration and the contamination of grain in storage was continued. Emphasis was placed on countywide grain sanitation programs. In these programs the local boards of county commissioners and county agents designate the elevators, farm storages, and dumps

which are to be baited so that the demonstrations and the rodent baiting program can be carried on simultaneously. A week's time is allotted to each countywide program. Department specialists give on-the-farm demonstrations on the use of rodenticides, and on the proper methods of rodent- and bird-proofing of grain storage facilities. Farmers and others who participate in a program are sold the bait at cost. During the year, 22 county programs were held and bait was distributed for use in 94 towns, 57 dumps, and 34 elevators. About 140 farm demonstrations were held within the 22 participating counties with about 2,700 producers in attendance. About 26,000 pounds of bait was distributed through the program.

Other methods used in conducting the program of preventing the contamination of cereal grains in storage included assistance to individual farmers on whose farms rodent infestation occurred, demonstrations at 4-H clubs, homemakers clubs, Farm Bureau and Farmers Union groups, assistance to Crop Improvement Associations, grain dealers, State Clean Grain Committee, Agricultural Stabilization Committee, Extension Service, and other agencies; and the use of visual aids and lecture material at vocational agricultural classes. Several radio and television programs covering grain sanitation were broadcast locally on public-service time.

It is reported that very little contaminated grain was seized in counties where clean grain programs were in effect. When a carlot of wheat is seized and condemned because of rodent contamination in a terminal market, the cereal grain is reduced from food for human consumption to food for livestock consumption at a loss of about $1 per bushel or about $2,000 for an average grain car. This loss is reflected back to the elevator shipping the grain. The work on the marketing of contamination-free cereal grain is important in that approximately 80 percent of the North Dakota grain is stored on the farm over winter. It is estimated that 100 million bushels of cereal grain will be stored on North Dakota farms this year.

This program has been favorably accepted by North Dakota grain producers and marketing agencies in view of the results obtained towards the goal of marketing contamination-free cereal grains.

OHIO

Improving price information (grain, hogs, and hay) (OHIO-D-1)

Grain.--The experimental market news program which provides daily price information on wheat, corn, oats, and soybeans was continued. This price information was obtained by telephone each afternoon after the close of the Chicago Board of Trade from about 100 grain elevators throughout the State. The daily price reports on cash grain were summarized on the basis of low, high, and "mostly" price paid at country points and prepared for release by phone to the wire services, two local radio stations, one radio station in Cincinnati, and two local newspapers. The information, placed on radio

and newspaper circuits during the night, was used by many radio stations on their 5 to 8 a.m. farm broadcasts which reached producers and grain handlers throughout the State. It was reported that the daily cash grain report was favorably received by grain trades people and grain producers and that this program was instrumental in firming up the prices paid grain producers in some areas. The cash grain daily price reports under this program were terminated on July 1, 1958, when the 2-year experimental period expired, and are now being conducted as a regular activity by Ohio State University.

Hogs.--The experimental market report which provides daily price reports of hogs received from about 85 interior markets was continued. This information was summarized and prepared for release via the wire services and by direct telephone or messenger service to several newspapers and radio stations making the daily hog price reports available to producers and the trade throughout the State. Three reports were issued daily at 8:30, 10:15, and 11:30 a.m. This program was reported to have provided producers and those in the livestock business with price information essential to the development of sound marketing programs. The dissemination of timely reports on hog prices was instrumental in establishing the market earlier in the day, thus saving much time and money for the marketers and helping the producer to know what the price situation might be when his hogs reached local markets. The program was also a factor in developing more competitive buying and selling on a quality and grade basis which is advantageous to both the buyer and the seller. The 2-year experimental period under which this program was supported by matching funds was completed on July 1, 1958, so this program is now being conducted as a regular activity by Ohio State University.

Hay and wool.--Experimental market news programs for hay and wool were initiated on July 1, 1958.

Providing new basic information (hogs) (OHIO-D-2)

The quarterly (September, December, March, and June) reports on sow farrowings and hog numbers were prepared by the Ohio Crop Reporting Service and released to a mailing list composed of farmer respondents, farm magazines, newspapers, radio stations, and other interested persons.

OKLAHOMA

Improving product quality and expanding market outlets (OKLA-A-1)

Poultry and eggs.--The program which provides assistance to producers and egg handlers on the proper methods of candling, grading, sizing, packaging, transporting, storing, and marketing eggs was continued. Most of this work was performed through personal contact by State Board of Agriculture marketing specialists at the farm level or the place of business of egg handling firms. During the year 45 meetings were held throughout the State to demonstrate proper methods of candling and grading and to encourage producers and retailers to improve the quality and marketing of eggs.

The assistance provided at the farm level on proper handling methods to maintain quality has been the most effective part of the program and has been an important factor in helping producers to obtain satisfactory prices for the 75 million dozen eggs sold on a graded basis in Oklahoma during the past year.

Marketing specialists continued to assist poultry processors to meet the official standards of the voluntary grading program and in packaging, handling, and merchandising of ready-to-cook poultry. Several visits were made to poultry processing plants in Oklahoma, Arkansas, Texas, Kansas, and Missouri to assist those plants marketing ready-to-cook poultry in complying with the requirements of the Oklahoma voluntary quality improvement program.

About 700 Oklahoma retail stores are selling ready-to-cook graded poultry from the approved plants. The program has been instrumental in improving sanitary conditions through the use of better poultry processing facilities, in reducing the amount of damage to birds, and in expanding market outlets for ready-to-cook poultry.

Fruits and vegetables.--Assistance was given cantaloup producers in west central Oklahoma in problems relating to maturity, in the adoption of proper grading and packaging methods, and in securing market outlets. Marketing specialists assisted in alleviating a glutted market situation for cantaloups by making contacts in local markets and enlisting publicity services from the press, radio, and television stations to help in marketing the crop at satisfactory prices, thereby avoiding what appeared to be a disastrous marketing situation for Oklahoma cantaloup producers.

Strawberry growers were assisted on the proper picking, grading, packing and marketing methods, and encouraged to sell their berries to processing plants on a graded basis. As a result they received returns of 40-50 cents per crate more than they would have received under the previously prevailing one-price system which did not take quality or size into consideration. Since approximately 40,000 crates of berries were affected by the service program on improving quality and marketing methods, it is estimated that additional returns to strawberry growers participating in the program were in the neighborhood of $16,000 to $20,000.

Dairy.--The Oklahoma department initiated a program designed to accelerate the rate of progress being made by the dairy industry in improving the quality of cream and manufacturing milk. Dairy marketing specialists were assigned to work with cream buying stations in improving cream handling methods and sanitation procedures used by the stations and also to assist producer patrons in identifying quality defects in the cream which they delivered. Follow-up visits were made by the specialists to the farms of producers having special quality problems. On these visits the specialists not only helped the producer determine the cause of the particular quality defects detected in his deliveries to the cream buying station but also demonstrated and explained to him the most effective equipment and proper practices for preventing contamination and quality deterioration in cream.

Specialists followed similar procedures in assisting producers of manufacturing milk in improving quality.

General.--The State Board of Agriculture, through its market news service, disseminated timely information pertinent to prices and analysis of marketing conditions of wheat, oats, barley, melons, pecans, peanuts, hay, feedstuffs, butterfat turkeys, fowl, eggs, and broilers. Through this program, price information at local points, as well as State and national, was collected and analyzed daily to supply the best current information available to producers of these commodities, and to keep the commercial trade informed of the market situation. It is reported that as a result of the market information program prices at markets throughout the State were stabilized, spreads in prices paid producers decreased, and shortages and gluts in marketing farm products reduced.

Providing new basic data (OKLA-D-1)

A detailed survey was made to obtain information on the source of feeder animals, finished grade of feeder animals at market time, and the type of market used--such as central markets, local auction markets, and direct sales to packers. Those cooperating in the survey included county agent, vocational agricultural teachers, local auction managers, veterinarians, and other persons connected with the livestock industry. Supplemental information was obtained from the Oklahoma City Stockyards on the number of cattle sold out of first hands for the slaughter market. This market information was used as check data for the cattle marketed from January 1 to July 1, 1958. The initial survey provided basic information valuable to the cattle feeding industry and was essential to the inauguration of quarterly cattle-on-feed estimates which are now part of the national cattle-on-feed estimating program. A published report on the results of the survey is planned at an early date.

OREGON

Maintaining the quality of stored filberts (ORE-A-1)

Under this project, packers and shellers of filberts are being helped to determine the storage procedures necessary to maintain optimum quality of both unshelled and shelled filberts during storage for varying periods and to adopt practical methods of converting existing facilities to accomplish this objective. Tests have shown that filberts cannot be successfully held in common storage longer than the beginning of the warm summer period, and it apparently is better to leave them unshelled if they are to be held that long without refrigeration. Storage at 35°F. was demonstrated to be satisfactory for shelled filberts, provided humidity is not permitted to go above 70 percent. Undesirable texture changes and molds may develop at higher humidity levels. The work has shown that storage at about 26°F., which can be maintained in most cold-storage warehouses, has certain advantages over storage at 35°F. The lower temperature is unsuited for such commodities as

fresh fruits which when stored in the same room with filberts may cause the development of excessive humidity and undesirable flavor in the nuts.

Improving quality and marketing practices (potatoes) (ORE-A-2)

This project is designed to assist potato handlers in improving storage and handling practices and in adopting practical methods of predetermining the cooking quality of potatoes so that they can carry out more effective merchandising programs.

A group of 140 Oregon homemakers cooperated with Oregon State College in testing the cooking quality of potatoes of low and high specific gravity. This group reported that potatoes (Russet Burbank variety) of high specific gravity were most mealy and most desirable for baking and mashing, whereas potatoes of low specific gravity were best for boiling. A trained panel reported similar results.

Further work was done toward the development of techniques and methods for accurate determination of sloughing of potatoes.

Results under this project indicate that potatoes may be sorted and marketed according to their cooking quality, thus providing a way of improving consumer satisfaction. The results are also important to growers and handlers in selecting potatoes for sale to processors. Specific gravity is directly related to yield of processed products; therefore, it is a factor of monetary importance to the processor.

Improving the quality and handling of seed (ORE-A-3)

This project is concerned with improving the quality of the seed of Alta fescue, Chewings fescue, common ryegrass, crimson clover, Highland bentgrass, and Sudangrass, which account for the major part of the $25-$35 million seed industry in Oregon. Specialists of the Oregon Agricultural Experiment Station worked with 17 seed warehouses during the year to determine if changes were needed in warehouse construction and the handling of seed to maintain viability. It has been found that the commercial storage used by Oregon seed warehousemen will maintain the quality of seed satisfactorily, provided the seed does not have excessive moisture at the start of the storage period.

The project was expanded to include work with seed marketing agencies on problems encountered in the shipment of seed to such areas as the Southern States, southern parts of Europe, and the tropics. On the basis of tests conducted by station specialists, it was recommended that the seed be dried before shipment to such areas to insure the maintenance of quality.

Developing virus-free certification programs for fruit, tree nut, and vine nursery stock (ORE-A-4)

The objective of this project, which was initiated in 1957 under the joint sponsorship of the Oregon Department of Agriculture and the Oregon Agricultural Experiment Station, is to develop methods and procedures for certification of virus-free nursery stock. Attainment of this objective will result in an improvement of quality and an increase in demand for nursery stock produced by Oregon nurserymen. Orchardists in Oregon and other States will benefit by having available a supply of virus-free stock. Reports from orchardists indicate that orchard trees grown from such stock come into production 3-5 years sooner and develop much larger bearing surfaces than infected trees do.

At the current stage of the project, emphasis is being given to the development of facilities and index hosts. These needs have been met for the time being and adequate nursery stock is available to supply trees for the next few years. During the year over 2,000 trees from 20 different nursery scion orchards were indexed for virus and the diseased trees found were removed so that they would not be used for propagation of future orchard trees. About 100,000 trees are propagated annually from these scion orchards. Many of the nurserymen need to expand their scion orchards to supply an adequate number of buds.

Prune and plum varieties were included in the virus indexing for the first time this past year. There are about 40 different varieties of these grown by Oregon nurserymen, and most of these have been found to be infected with viruses. A search for virus-free prune and plum trees was started during the year, and at least 1 such tree in each of 16 different varieties was found.

A means of greatly reducing the time needed in indexing for such diseases as prune dwarf in Italian prunes, peach stunt in peaches, necrotic ring spot, and sour cherry yellows was discovered during the year. Evidently the virus which causes a necrotic local condition in Shiro-fugen also causes these diseases. The virus can be detected in about 6 weeks on bench-grafted Shiro-fugen trees in the greenhouse. A minimum of 2 years was needed in indexing for these diseases on prune, peach, and Montmorency cherry trees.

Virus indicator plants for pome fruit viruses were assembled during the year, and their use in detecting viruses is being tested.

Improving filbert production estimates (ORE-D-1)

This project has as its purpose the development and testing of objective methods of sampling so as to improve the accuracy of production estimates and provide preharvest indications of the quality and size composition of the crop.

The third filbert production forecast employing a ratio estimate of nuts set, weight of nuts, and percentage of blanks was made in early

August 1958. Field work in making the measurements started on July 15 and was completed August 7, 1958. The data collected were matched with data collected in 1957 to obtain ratio indications. During the field work, data were secured upon which to base estimates of the percentage of blanks and the final size grades.

Analysis of the data has revealed a relationship between the length of fruiting twigs and the number of female flower clusters, percentage of nuts set, number of nuts per cluster, and number of nuts set per twig. From the standpoint of quality improvement, it is significant that the long twigs and even those of moderate length produced a much higher percentage of nuts which graded large, jumbo, and giant than the short twigs. Blanks apparently are not related to twig length.

The ratios derived from these objective measurements are being used as additional indicators in arriving at production forecasts.

Providing marketing data on farm products (grain) (ORE-D-2)

This project was initiated late in the reporting year, and there were no activities to report.

PENNSYLVANIA

Expanding market outlets (PA-B-1)

Promotion of agricultural products in Pennsylvania is coordinated through a relatively new organization, the Food Marketing Advisory Council, composed of representatives from various commodity groups, food marketing agencies, and related industries. Many of the activities of the Pennsylvania Department of Agriculture in the promotional field are related to and in support of the program of this council. In addition to its coordinating function relating to promotion, the council also is concerned with overall problems of marketing improvement and the development of comprehensive programs to deal with them.

The Pennsylvania department serves as an informational link between the council and member agencies, groups, and individuals, and also has general charge of program development and guidance. It has instituted a monthly publication, the FMAC Promotional Bulletin, as one means of keeping council members informed of the different commodity promotions underway or being programmed for the future. This publication is being distributed to about 4,800 individuals and agencies concerned with food marketing.

The council has endorsed a Seal of Quality program as one approach to improvement in the marketing of Pennsylvania farm products. The Pennsylvania department developed a pilot program for eggs during the year and has under consideration similar plans for apples and potatoes. At present 24 egg marketing agencies have applied for participation under the Certified Egg program. There were actually 9 of these operating under the program during July 1958. These plants packed and sold over 400,000 dozen certified eggs

in consumer cartons during that month. The Pennsylvania State University is cooperating in evaluating and introducing this program to the trade and consumers. An intensified promotion campaign was staged in one of the cities in the State to test various promotional techniques and to serve as a guide for introducing certified eggs and other products in other cities. Evaluation of the results is in progress. It is noteworthy, however, that a major dairy which includes eggs among the products distributed switched completely to the certified program as a means of solving a long-standing problem of securing uniformly high quality supplies.

Assistance also was given in planning and conducting several other commodity promotion campaigns and events such as June Dairy Month, Pennsylvania Peach Time, Pennsylvania Broiler Week, Somerset Maple Festival, Adams County Apple Blossom Tour, Pennsylvania Chicken-of-Tomorrow Contest, Cherry Pie Baking Contest, and September Canned Foods Month.

Although improvement in and coordination of commodity promotional programs is an important need in Pennsylvania there are other areas of work which should be expanded in order to achieve a well-balanced marketing service program. Efforts are being directed toward this end. For example, the department upon request made an analysis and survey of the merchandising methods and outlets of a grape processing and marketing organization to assist the agency in securing better outlets and reducing selling costs. Meetings were held with livestock groups with the view of developing a livestock conservation program and of improving efficiency in the handling of livestock. Assistance was given several farm organizations in studying various types of marketing regulations, including marketing agreements and orders, as possible means of improving and standardizing the grade and pack and of financing promotional activities.

Improving marketing facilities and methods (PA-C-1)

No activities were conducted under this project during the reporting year.

Providing new and improved marketing information (Christmas trees and eggs) (PA-D-1)

Results of the original Christmas tree survey started in April 1957 were published during the year. This report provides detailed information by counties of the varieties and ages of trees and is estimated to represent better than 90 percent coverage of all commercial Christmas tree plantings in Pennsylvania. The process of achieving complete coverage and keeping the data current is a continuing one. Considerable followup will be needed before full coverage is reached.

Additional surveys were conducted during September, October, November, and December 1957, to obtain information on grower prices by ages, varieties, and sizes. This information was summarized and released immediately after each monthly survey. Many comments were received from industry members to the effect that these reports helped materially in stabilizing the market.

The survey of the Pennsylvania egg industry was completed during the year and the results published. This survey provides background information on such items as the size and breed composition of laying flocks, areas of concentrated egg production, relative importance of different outlets and methods used by producers in marketing eggs, and egg prices at the producer level. Marketing specialists of the Pennsylvania State University assisted in planning the survey. Over 18,000 copies of the bulletin, "Egg Marketing by Pennsylvania Producers," based on the survey, have been distributed to producers and marketing agencies. One large egg marketing organization has used the information to revamp its entire procurement program.

Fruit tree survey (PA-D-2)

A survey of all known commercial orchards in Pennsylvania was completed and the results published during the year. This survey provided data on numbers of apple, peach, and sour cherry trees by varieties and age groups; also production of each kind of fruit in 1956. A similar survey was conducted in 1953. The two surveys provide needed inter-census data on the directional trends of bearing and nonbearing surface by varieties. Over 3,000 copies of the published results have been distributed to producers, interested agencies, and officials. The Pennsylvania State Horticultural Association is using the information in developing recommendations to guide future developments in the fruit industry.

PUERTO RICO

Improving the quality of processed products by use of quality standards and regulations (PR-A-1)

The Puerto Rico Department of Agriculture and Commerce, in cooperation with the Processed Foods Standardization and Inspection Branch, Agricultural Marketing Service, United States Department of Agriculture, continued the work on developing grade standards and regulations for canned gandures, canned guava nectar, and brined citron to be used to improve and maintain the quality and uniformity of these processed agricultural products.

Canned gandures.--A proposed regulation on standards for canned green gandures was prepared and submitted to processors and other interested persons for their suggestions and recommendations. Consideration was given to the recommendations obtained from processors, which were mainly on the tolerances established for the factor of defects. About 180 samples of canned green gandures were analyzed, and it was found that the tolerances for defects were too strict in the proposed standards. As a result, minor changes will be made in the revised regulation.

Canned guava nectar.--Work was continued on the development of grade standards and marketing regulations for canned guava nectar. This program was undertaken in recognition of the marketing problems caused by the varied

appearance and quality of different lots of processed guava nectar. About 75 samples of the canned product were analyzed to obtain information on color and grittiness. The results of the analysis and tests were used in developing quality factors for grade standards.

Brined citron.--This product is prepared by fermenting the fruit of the citron tree in brine after removing the pulp and seed. This work was undertaken to assist processors in marketing a uniformly high quality product. During the past year, samples were analyzed to obtain information on size, shape, and defects to be used in developing quality factors for grade standards for this processed product. Photographs of the samples were made to show the maximum defects, such as blemishes, and the shape and form of the citron halves that should be permitted in determining proposed standards for each grade. The data obtained from this analysis were used as a basis for a format on Puerto Rico standards. Department technicians also visited processing plants to study the quality factors and sanitary conditions to be considered in establishing grade standards and regulations.

Improving marketing facilities (PR-C-1)

The survey appraising the condition and operation of marketing and processing facilities in Puerto Rico was completed and 1,000 copies of a 195-page report were prepared for distribution on January 7, 1958. This report contains recommendations on improvements needed in marketing and processing facilities, and on improving the marketing practices for livestock, poultry, dairy products, pineapple, and other fruit and vegetable crops.

SOUTH CAROLINA

Providing basic data and other marketing information (SC-D-1)

The Crop Reporting Service continued it program of providing new and timely basic data on South Carolina agricultural crops. During the past year, the following types of reports were issued: (1) A monthly bulletin and other periodic releases on acreage, yield, production, and value of South Carolina crops, as well as releases on dairy, livestock, and poultry statistics; (2) commodity bulletins indicating current estimates by counties for corn, cotton, soybeans, tobacco, wheat, oats, peanuts, livestock, cattle, hogs, milk, poultry, and egg production; (3) special releases indicating county estimates for tomatoes and watermelons; (4) special current reports on production forecasts and marketing information for pecans, chickens, wool, hybrid corn, livestock slaughter, calf crop, and lamb crop; and (5) six county agricultural bulletins which provide crop estimates for corn, cotton, soybeans, tobacco, wheat, oats, peanuts, and barley.

These data are useful to producers and marketing agencies in the following ways: By (a) providing specific market information which assists

growers and marketing agencies in making marketing decisions, (b) helping in determining production and marketing trends, (c) providing information on competitive market situations, (d) providing reliable periodic data on agricultural products in storage and on their rate of disappearance, and (e) helping buyers and producers keep abreast of changes in available supply and demand situations.

A peach tree survey was initiated in July 1958 to provide current data on the number of peach trees by ages and varieties. The field work should be completed during the fall of 1958 and plans are to publish the data early in 1959.

SOUTH DAKOTA

Providing marketing information and basic data (SD-D-1)

Under the program conducted by the South Dakota Crop and Livestock Reporting Service emphasis was placed on assembling, compiling, and releasing information on the quarterly pig crop, county and geographic estimates of the pig crop, calf crop, milk production, chickens raised, lamb crop, cash receipts from farm marketing, and marketing information on other South Dakota crops.

Hogs.--The quarterly pig reports are designed to determine the number of hogs and pigs on farms in each age group to serve as a guide in forecasting marketings and the supply of pork. These reports also contain a forecast of expected farrowings, which is used as a guide in determining the expected pig crop. Approximately 34,000 hog farmers marketing nearly 2 million hogs were affected by the published results of these reports.

Soybean and sorghum varieties.--The soybean and sorghum variety surveys were conducted to determine the major varieties planted in South Dakota and the locality in which the different varieties are grown. The results of these surveys were published in a special release and in "South Dakota Agriculture 1957." These estimates are used by farmers to determine varieties planted in a particular area and which varieties offer the best marketing prospects. Seed companies use these estimates to determine the prevalence of different varieties, sources of supply, and approximate amount of each seed variety available. The Agronomy Department of the South Dakota College uses the data to facilitate its research work with soybean and sorghum varieties.

Livestock.--A survey of about 4,500 farmers throughout the State indicated that there were 17,540 dairy cattle, 87,647 beef cattle, and 114,960 sheep in the State. The results of this survey are used to determine not only numbers but also the most prevalent breeds. The market many times is governed by the demand for the different breed types.

Cattle, hogs, and sheep.--A survey was made to obtain information on methods of marketing, whether through public stockyards, livestock auctions, packing plants, direct to farmers, or through other outlets. This survey also provided information on the numbers of cattle, hogs, and sheep sold for slaughter, for feeders, and for breeders.

Dairy.--A 54-page dairy bulletin was published containing data on cow numbers, breeds of cows, milk production, methods of marketing, utilization of milk, dairy manufacturing within the State, feeding practices, feed ratios, prices concerning the dairy industry, and income from dairy products. These statistics in the dairy bulletin are designed to help farmers, cream stations, milk plants, and others connected with the dairy industry to operate their business in a more efficient manner and to develop sound marketing operations.

County bulletins.--Fifteen county bulletins based on surveys made by the South Dakota Crop and Livestock Reporting Service, showing county and township data on crops, livestock, prices, sales, marketings, population, weather, and soil, were released. Each bulletin is a comprehensive report for a particular county and provides farmers and other interested persons with current information on marketing farm products. This information is also used as a basis for determining where more adequate and efficient marketing facilities, such as elevators, livestock auctions, and packing plants, are needed.

The county estimate program was continued. It included the publication of data on the number of chickens raised, egg production and milk production, the pig crop, and estimated income from farm marketings.

TENNESSEE

Improving marketing methods and expanding outlets (poultry and eggs) (TENN-A-1)

The program on improving the quality of eggs and marketing practices was continued. During the past year four 2-day egg grading schools were held in principal cities throughout the State to provide instructions in the proper procedures on grading, sizing, candling, and handling. About 200 persons attended these schools; three-fourths of those attending passed the requirements which permit them to grade eggs for sale at retail in Tennessee.

In cooperation with Extension Food Information specialists, material was developed for television programs and news releases to promote the sale of eggs on a graded basis and inform consumers on egg quality factors. Three meetings were held with poultry processors to explain the requirements of the National Poultry Products Inspection Act. Personnel of the Transportation and Facilities Branch, United States Department of Agriculture, worked with Tennessee Department of Agriculture personnel by providing demonstrational material and discussing problems in connection with meeting the requirements of the National Poultry Products Inspection Act, and by providing assistance to poultry processors in improving the efficiency of their operations.

The department has received numerous requests from producers to continue the egg grading schools, and many poultry raisers have requested the department to assist them in improving their poultry processing operations.

Improving livestock marketing methods (TENN-B-1)

Assistance was provided again in conducting 12 lamb pools at which about 23,000 lambs were uniformly classified by department specialists. As a result of this program, it is estimated that the participating producers received about $20,000 in additional returns as the pool prices averaged about 1 cent per pound higher than comparable prices of graded lambs sold at the Nashville market.

Eleven wool pools were conducted at which 578,000 pounds were sold on a graded basis, at 5 to 10 cents per pound more than was paid by companies buying from producers in the country. It is estimated that the total additional return to producers selling through the wool pool was approximately $35,000 for the past marketing season.

Assistance was given in conducting 15 feeder calf sales at which 7,420 calves were sold. It is reported that producers received about 1½ to 2 cents per pound more for calves sold at these sales than was paid for comparable grades sold in the open market, which amounts to a total of about $45,000 in additional returns to producers. Three feeder pig sales were organized at which about 2,000 hogs were sold at prices 10 to 12 cents per pound above prices received for comparable grades of feeder pigs at regular established markets.

Live hog and carcass grading demonstrations were held by department specialists in middle and west Tennessee. Grade demonstrations were also given by marketing specialists at four Junior Fat Cattle shows and sales.

Providing special marketing information (TENN-D-1)

The daily reports on market conditions and prices for eggs, broilers, turkeys, and other poultry were continued.

TEXAS

Improving egg marketing (TEX-A-1)

In cooperation with the Extension Service, the Texas Department of Agriculture conducted a series of regional meetings at which about 8,000 producers, egg dealers, wholesalers, and retailers were informed regarding requirements of the new Texas Egg Law, the quality factors for eggs, and proper candling, grading, packing, and handling methods. Intensified training in these procedures was given employees and operators of egg marketing firms at special schools. Information about the egg law and proper egg marketing methods also

was disseminated through radio, television and newspapers. Since these activities were initiated there has been a marked improvement in the quality of eggs being sold through retail channels.

In connection with broiler marketing, the Texas department organized an advisory committee composed of producers, feed dealers, and processors to assist in improving the marketing information program for broilers in east Texas.

Improving marketing of sweetpotatoes, watermelons, seed and grain (TEX-B-1)

Sweetpotatoes.--The Texas department continued various activities designed to improve sweetpotato quality, encourage grading in accordance with official standards, and expand outlets. By making available to growers of market stock a list of producers of certified sweetpotato plants, the department helped these producers secure outlets and improved the market quality of the Texas crop.

Prior to the marketing season, a team of marketing specialists conducted a series of meetings at which demonstrations of proper grading and handling practices were given, and the advantages of using official grades were discussed. Over 1,800 growers and shippers were assisted through individual contacts in adopting the recommended practices and methods.

A survey was conducted among consumers in several major Texas cities to determine grade preferences. Producers and shippers were informed that a high percentage of the consumers interviewed preferred sweetpotatoes of U. S. No. 1 quality. This helped to increase participation in the voluntary grading program. As a means of stimulating purchases, the Texas department furnished chainstore buyers information on the availability of sweetpotatoes in the State. Special programs and newspaper articles were prepared to direct the attention of consumers to the product. For example, feature stories explaining grades to the consumer were disseminated to over 350 weekly and 79 daily papers in Texas. Free radio and TV time were provided the department for presenting the consumer programs developed.

Some gain was registered in the percentage of the sweetpotato crop marketed on a grade basis. This took place despite the fact that the grading program last year was voluntary whereas in the preceding year it had been compulsory. About 71 percent of the 1958 Texas crop was marketed in 50-pound crates; this percentage represented an increase of 11 percent over 1956 when the program to discourage bulk shipments was intensified.

Watermelons.--The program to broaden outlets for watermelons was concentrated on the producing areas in east and central Texas which normally experience the greatest marketing difficulty. Before the marketing season, some 4,000 informational bulletins were prepared and distributed to buyers. These showed the anticipated production by varieties in each county in east and central Texas, the names and locations of local shippers and weighing stations,

and the expected harvesting periods. This service helped to move the crop from these areas but did not prevent a price decline brought about by the overlapping of marketings from south and south central Texas. Unusual weather conditions which affected planting schedules and delayed maturity in these areas resulted in the simultaneous ripening of melons in most of the Texas watermelon-producing areas. Next year it is planned to extend this marketing service to include the production areas in south and south central Texas.

Seed.--The department intensified its program of demonstrating the factors of seed quality and promoting the sale of certified and registered seed for such crops as alfalfa, cantaloup, clover, corn, cotton, various grasses, millet, okra, peanuts, sesame, barley, oats, rice, rye, wheat, soybeans, sorghum, and watermelons. As an example of this work, specialists of the department demonstrated at two regional meetings of cotton growers the comparative values and germination qualities of certified and field-run seed.

Feature articles on seed quality were disseminated to farm journals and newspapers. In cooperation with the Extension Service, the Texas Seed Board, and Texas Technological College, the department prepared and distributed bulletins relating to seed certification standards and the Texas seed law and regulations, and a seed directory. This directory provided a list of all registered plant breeders and certified seed growers in the State.

Grain storage facilities.--The service of providing producers and shippers of grain with information on the availability of storage space in the State was continued. Assistance also was given in coordinating transportation facilities to alleviate local shortages of trucks and rail cars to move grain to storage points. This service resulted in the direct placement in storage of nearly 3.5 million bushels of grain which otherwise would have been exposed to the weather.

VERMONT

Improving milk quality (VT-A-1)

The Vermont Department of Agriculture in cooperation with the Extension Service continued the program on improving the flavor and quality of fluid milk. In conducting this program, the department marketing specialist provides assistance to milk producers and distributors in eliminating causes of off-flavor on the farm and correcting off-flavors resulting from improper handling of milk during marketing.

Under the stimulus of the Vermont milk quality improvement program, the testing of milk for flavor was extended to all producer deliveries. Other developments under this program during the past year included the replacement of old equipment in 20 pasteurizing and bottling plants which substantially

improved the flavor of milk retailed from these plants. This quality improvement work has contributed to the 15 percent gain in retail sales of milk in Vermont over the past 3 years.

VIRGINIA

Improving quality and marketing methods (eggs) (VA-A-1)

An all-out effort was initiated during the year to place the Virginia commercial egg industry on a sound economic basis by improving quality, increasing the efficiency of egg assembly, grading, and handling operations, expanding the use of the official grading system, and encouraging increased consumption through promotional activities. Work under this project was concentrated primarily on the quality, marketing organization, marketing practices, and promotion aspects of egg marketing.

Other activities designed to improve the physical handling of eggs in the marketing process were carried on under project VA-C-3. Marketing agents of the Virginia Department of Agriculture worked closely with producers interested in establishing more effective egg quality control programs. This work stressed the importance of proper cooling facilities and frequent delivery as well as proper methods of cleaning and otherwise preparing eggs for delivery to grading stations, or to wholesale and retail outlets if the final grading and cartoning operations were performed on the farm. Assistance was given egg grading and packing plants in the adoption of quality control procedures and more effective candling methods. Packing plants and producers were helped in developing equitable marketing contracts. By having an assured supply of high quality eggs, these packing plants were able to fill the needs of large-volume buyers and thus increase outlets for Virginia eggs.

Marketing agents assisted in promotional efforts by contacting large buyers and informing them of what the Virginia egg industry was doing to improve egg quality and to establish reliable sources of supply. Several large retail outlets modified their procurement policies and are now securing a part or all of their requirements from Virginia packers.

Improving grading and marketing methods (livestock) (VA-B-1)

A major objective of the Virginia livestock marketing program is to stimulate the marketing of meat-type hogs. Two basic plans are being pursued to advance this objective. The development of a live-grading program represents the keystone of one of these plans. Several of the important packing plants in the State are cooperating in the live-grading program and are buying all hogs from local sources on a grade-price basis. One of the activities conducted last year under this project was concerned with improvement in the accuracy of live-grading. Specialists assigned to this project helped to train graders in live-grading techniques and showed them how to improve their accuracy. This work has made it possible for the Virginia grading service to achieve an accuracy of about 80 percent under the live-grading program. This means,

for example, that about 80 percent of the hogs placed by graders in the U. S. No. 1 live-grade were U. S. No. 1 on a carcass grade basis.

The other basic plan approaches the meat-type hog problem from the production side. This is primarily a function of production specialists of the Extension Service; however, marketing specialists of the Virginia department are assisting producers in locating sources of meat-type breeding stock and feeder pigs and in determining the most advantageous weights at which to market. Prior to this individual contact work, many hog producers in Virginia had been either under- or over-finishing their market hogs, resulting in a lower grade and in lower prices.

Benefits of the program are showing up in a pronounced rise in the percentage of hogs grading U. S. No. 1. For example, from May through December 1957, only about 43 percent of the hogs live-graded by the Virginia department graded U. S. No. 1. From January through July 1958, the average was slightly over 61 percent U. S. No. 1. Approximately 100,000 Virginia hogs were marketed under the grading program during this latter period. This means that on the basis of the usual premium in this area of about 75 cents per hundred pounds for the U. S. No. 1 over the U. S. No. 2 grade of hog, and the increase in percentage of hogs grading U. S. No. 1, producers of these hogs received additional returns of approximately $27,000. Also, a decrease in the percentage of U. S. No. 3 grade hogs, many of which were upgraded to U. S. No. 2, resulted in additional monetary benefits to the hog industry in the area.

Other phases of the livestock marketing service program in Virginia were carried forward and several new activities initiated. In cooperation with the Federal-State Statistician, surveys of cattle on feed were made in October 1957 and January 1958. This information was made available to livestock producers and marketing agencies to assist them in making marketing decisions; it also was used as the basis for planning the special slaughter cattle sales sponsored by the Virginia department. Ten of these sales were held during the year in cooperation with producer organizations. These special sales stimulated competition at local markets and improved producer prices. Demonstrations of slaughter grades and how to sort animals for the best sales results were staged in connection with these sales. These demonstrations were designed to assist producers in becoming more proficient in recognizing grade differences and in determining when cattle on feed had reached the proper grade for best marketing results.

In southwest Virginia, the demand for replacement ewes has increased with the trend toward an expanding sheep production in that area. Marketing specialists of the Virginia department, in cooperation with county agents, organized and conducted a special native ewe sale to help meet this demand. This effort not only helped to accomplish this purpose but created a better market for local producers having ewes for sale. The approximately 1,500 head of ewes sold at this special sale brought about $2 more per head than they would have through private sale.

A new activity this year was the organization of a series of meat merchandising clinics at which proper methods of cutting, displaying, and pricing lamb were demonstrated by a representative of the National Livestock and Meat Board. Nearly 600 retailers and packers attended the 6 clinics held over the State.

Under another new activity, marketing specialists assisted the Virginia cattle industry in developing cattle feeding contracts to create better marketing opportunities for the producer of feeder cattle and to enable producers of surplus corn to market the surplus through a cattle feeding program. Producers of feeder cattle in certain areas of the State have encountered marketing problems in attempting to finish these cattle on grass. This has created an interest in contract feeding whereby they can retain an ownership interest in the cattle but be able to market them as grain finished animals. On the other hand, grain producers in the Tidewater area of Virginia have surplus grain but lack the capital to finance the purchase of feeder cattle or prefer not to incur the price risk on feeders. The development of cattle feeding contracts has provided a practical solution to this problem.

Improving marketing practices and expanding outlets (fruits and vegetables) (VA-B-2)

Sweetpotatoes.--With the assistance of marketing specialists from the Virginia Department of Agriculture, growers and packers of sweetpotatoes on the Eastern Shore of Virginia developed a program to improve the quality, standardize the pack, and increase sales of this product. This program was the outgrowth of emergency efforts to find outlets for surplus supplies of 1957 crop sweetpotatoes. A committee of growers and packers which was organized to deal with that emergency problem is responsible for the general guidance and conduct of this program. During the past year this committee, with the assistance of marketing specialists from the Virginia department, has given consideration to a variety of problems relating to improvement in sweetpotato marketing. Details of the program were worked out in time for application to the 1958 crop. Specifications, including the variety, of the pack to be promoted have been established. A label for the special quality pack has been developed, and the initial promotion activities for the 1958-59 marketing season have been completed. Several marketwide promotions have been scheduled for cities in Virginia and other Atlantic seaboard States. Personnel of the Virginia department will assist in these promotions by contacting buyers to explain the quality program and to show retailers how to build effective sweetpotato displays and to make the most effective use of point-of-sale material purchased entirely with industry funds.

The success of this program to increase the sale of sweetpotatoes in the fresh market will be influenced by the outcome of efforts to develop processing outlets for sweetpotatoes which do not meet the more stringent pack specifications adopted for the fresh market. Specialists of the Virginia department provided assistance in organizing a cooperative marketing agency to handle sales of sweetpotatoes to processors and in working with

representatives of this agency in contacting processors to determine how the agency could better satisfy their needs for processing stock.

Tomatoes and other vegetables.--A start was made toward improvement in the quality of "cannery" tomatoes produced on the Eastern Shore of Virginia. Demonstrations of the quality requirements for cannery tomatoes were conducted in the field to assist pickers in recognizing quality differences and in reducing the percentage of culls in the tomatoes picked. Arrangements were made to sell these higher quality tomatoes on a grade basis, the grade to be determined by official Federal-State inspection. Excessive damage to tomatoes in the area due to heavy rains so demoralized the tomato market that results from the market test were inconclusive.

Through joint efforts of the Virginia department and the Extension Service, the Hanover County Vegetable Growers' Association was formed in January 1957 to develop an organized method of marketing locally grown vegetables in the Richmond, Va., area. The traditional pattern of marketing for vegetables grown in Hanover and neighboring counties has been for the grower to grade and pack them on the farm, haul them to the Richmond produce market, sell them to a dealer at the market, or sell them himself at the farmer's section of the market. With changes in distribution methods and the accompanying decline of the Richmond market this system of marketing has become less and less satisfactory. The goal of the association is to centralize the grading, packing, and selling functions and thus to establish outlets through large-volume buyers who require a reliable source of uniformly graded products.

During 1957, activities of the association were concerned with a study of the problem and development of an action program. At the start of the 1958 season a total of 135 farmers had joined the association and arrangements had been made to operate through a sales agent located on the Richmond market. Results of the 1958 season's experience to date have demonstrated the value of this new marketing plan. Growers selling through the association received about 25 cents net per package more than growers selling in the traditional way. They also saved many hours which could be devoted to the production process. Moreover, growers selling through the Association were able to market all deliveries whereas many growers selling individually had to dump products for lack of outlets. Better facilities and equipment are needed to help insure the continuing success of this program. Plans are to locate on the new Richmond market which is under development.

Strawberries.--Assistance was again provided strawberry growers in the Lee County, Va., area in maintaining uniform quality and pack standards and in securing outlets for the product.

Apples and peaches.--Special efforts were made to assist peach growers in securing outlets for the large 1958 crop. A brochure containing information regarding areas of concentrated peach production, varieties, quality, harvest dates, and names and addresses of peach packers was prepared at the

start of the season and distributed to over 2,000 buyers. Material prepared by the Virginia department regarding the excellent quality and ample supplies of Virginia peaches was disseminated through radio and TV stations, and newspapers.

Several apple packers having difficulty with excessive bruising and improper sizing of apples were helped in overcoming these problems. By observing the packing equipment and packing methods during packing operations, marketing specialists were able to point out to the plant management the particular piece of equipment or specific operation responsible for the bruising or lack of size uniformity. Benefits of this work to the packers involved is estimated at between $20,000 and $25,000 for the 1957 season. In addition, two of the packers in this group were able to increase their returns by about $15,000 by converting from a basket to a tray pack. Specialists of the Virginia department suggested this change in the type of package and assisted the plants in making the conversion.

Activities were continued to assist the Virginia Apple Commission in promoting the sale of Virginia apples. Specialists visited a number of markets in Virginia and nearby States where they called on wholesalers, retailers, and institutional users to inform them about supplies, varieties, and qualities of Virginia apples and to provide interested retailers with the Commission's point-of-sale material. Over 75 supermarkets were visited and assisted in building apple displays utilizing the point-of-sale material. On these visits in the markets, the specialists checked the quality, condition, and sizing of apples received from Virginia sources and made objective comparisons with apples received in these markets from competing areas. Detailed reports based on these market observations were sent to about 200 Virginia growers. Information concerning needed improvements in grading, packing, and handling Virginia apples gathered on these visits into the markets was presented to growers and packers during the winter at a series of meetings attended by nearly 550 growers and packers.

Other apple promotional work of the Virginia department included the building and maintaining of displays and exhibits at various conventions such as those of the Virginia Food Dealers, Virginia Restaurant Association, and the Virginia Dental Association. One feature of the exhibit at the Virginia Food Dealers' Convention was an apple display incorporating the various aspects of good apple merchandising such as bag and bulk combination, color contrast, proper location in the store, and availability of different varieties to meet the needs for cooking and eating out of hand. At this convention specialists discussed apple merchandising with about 400 retail store owners and managers.

Improving facilities and methods for handling and storing (grain and hay) (VA-C-1)

Marketing specialists of the Virginia department, in cooperation with county agents, assisted producers of about 15,000 tons of surplus hay in

southwest Virginia in determining the grade and value of the hay and in locating markets. Producers in this area had had little experience in marketing hay and the service provided made an important contribution toward solution of last year's problem. Another area of Virginia experienced drought conditions with a resulting shortage of hay. Through the services of the department a number of outlets for the southwest Virginia surplus were discovered in this drought area. This experience revealed a number of basic improvements that need to be made in the future if hay marketing in the area is to be placed on a sound basis. Foremost is the matter of quality. Improper curing and storage in many instances result in an inferior product. Work is underway with producers in this area to assist them in adopting proper harvesting and storage practices. This work is needed since prospects are for a continuing surplus in the area.

Activities were continued to demonstrate the grading of grain in accordance with official standards and to promote more widespread use of these standards in grain transactions. Grain marketing specialists during the past year were stationed at two grain market centers where they carried out a demonstration program to acquaint producers and elevator operators with the methods and advantages of official grading.

In an effort to counteract price discrimination against Virginia grown soybeans for alleged deficiencies in oil content, tests were again made of samples taken from various areas of the State. These tests revealed that there was no basis for the discrimination against Virginia soybeans so far as oil content is concerned. Information relating to variety, grade, dates of planting and harvesting, and area where grown was obtained for each sample. This information is being analyzed to provide producers and marketing agencies with data on the relationship of these factors to oil content.

Another service provided was the training of grain dealers in the proper procedures for operating moisture meters and the calibration of this equipment so that accurate results would be secured. The grain marketing specialist appeared on a number of programs and before numerous groups to explain and demonstrate good grain marketing practices.

Improving marketing practices (sweetpotatoes) (VA-C-2)

Specialists of the Virginia department assisted a sweetpotato marketing association in developing facilities for marketing cannery sweetpotatoes grown on the Eastern Shore of Virginia. It is estimated that the activities of this association added at least $75,000 to the incomes of sweetpotato growers in this area last year.

Improving marketing facilities and handling methods (VA-C-3)

The scope of activities under this project was greatly expanded during the year to include assistance to eight egg candling and packing plants in designing new packing plants, selecting new equipment, planning equipment

layouts, improving work methods and product flow through the plant, and increasing the efficiency of egg assembly operations.

In conducting this work, flow diagrams were prepared of each plant to detect places and operations where inefficiencies were occurring due to poor arrangement and improper operation of equipment, imbalances in the working force, and congestion. A separate and detailed analysis was made of the candling operation since it was a major cost factor. In relating the cost of the candling operation to the quality of eggs being candled, it was found that two cases of good quality eggs could be candled in about the same time that it took to candle one case of low quality eggs.

The analysis of these eight plants revealed total costs of pickup, sampling, candling, in-plant handling, and materials ranging from about $1 to $1.50 per case (30 dozen).

Results of the individual plant surveys were presented to management with recommendations as to changes in equipment and operating procedures needed to improve efficiency and lower costs. Two of the plants decided to establish entirely new facilities on the basis of the survey data.

Specialists of the Virginia department continued work with apple packing plants to improve efficiency. By reorganizing the equipment, layout, and use of labor, two plants were able to effect savings in annual labor costs alone of about $4,500 each.

Continued assistance was given the Richmond Wholesale Produce Market Authority in planning a new wholesale food center for Richmond, Va. The site has been purchased and final plans to finance the center are under consideration.

Providing special marketing information (VA-D-1)

The Virginia department's weekly report on supply and demand prospects for agricultural products was furnished newspapers and radio and television stations over the State. Marketing specialists, market news personnel, and the Federal-State Statistician collaborated in the analysis and preparation of the information going into this report. Special information regarding such factors as location, quality, quantity, and peak marketing periods needed in connection with commodity promotion campaigns carried out under other projects was developed under this project.

WASHINGTON

Improving marketing methods and expanding outlets (WASH-B-1)

Apples.--At the request of and in cooperation with the Washington State Apple Commission, the Washington Department of Agriculture conducted a program to assist operators of apple packing houses in improving their packs.

Reports to the commission from its fieldmen indicated a growing dissatisfaction among wholesale and retail outlets with the condition, workmanship, and lack of uniformity of packs of apples being received from the State of Washington.

As the initial step in the program, procedures were developed under which individual plant-by-plant surveys would be made and the performance of individual packers on the line measured so that useful comparisons could be made of individual plant and individual worker performance. In the survey, which covered 158 packing plants, marketing specialists visited the plants of cooperating houses and drew samples of 15 to 20 boxes from as many packers from the current packs. These boxes were opened and examined for detailed quality of workmanship, for adherence to grades, and for weight of pack.

Grade was broken into four categories: Percentage of apples below grade because of blemishes or defects, percentage of apples below grade because of color, percentage of apples that ran from the lower limit of the grade to 50 percent color in the Fancy and 75 or 65 percent color in the Extra Fancy, and the percentage of apples that were above these two latter color limits. These data were recorded and analyzed. The work was summarized and a report returned to the cooperating packing plant. Included in the report sent to the plant was a record of industry averages together with the average of the three high and the three low houses on each factor being measured.

The work of the specialists was coordinated and checked by ordinary supervisory processes. In addition, the performance of each specialist was statistically supervised. Statistical supervision involved the use of one specialist who worked in the same plants on the same samples as other specialists. The performances of these specialists then were compared. Noticeable differences between them resulted in additional briefing and training sessions.

The reports sent to the plant provided the packing foreman with an objective method of checking the work of his packers and the warehouse manager with a means of evaluating the plant's performance in comparison with other plants in the industry. Another result of the survey was that the three main producing areas in the State, Yakima, Wenatchee, and Chelan to Oroville, now have an accurate and unbiased basis for comparison of packs among the three areas. The survey compared the three areas for (1) net weight of Delicious, Red Delicious, and Winesap apples for standard and tray packs, and (2) workmanship in preparing apple packs for the standard pack of Delicious, standard pack of Winesaps, wrapped cartons of Delicious, and unwrapped cartons of Delicious. Activities under the project have made the apple industry of the State more quality conscious.

Caneberries.--At the request of berry growers in western Washington, the Washington Department of Agriculture initiated two phases of action to assist in marketing the 1958 crop.

In phase I, the premarketing period, four things were done to help growers decide on their marketing plans. First was the preparation of a detailed and complete statistical brief on raspberry and blackberry production, pricing, and marketing in cooperation with the Agricultural Estimates Division, U. S. Department of Agriculture. This brief included a summarization and analysis of prices in the Seattle-Puget Sound area market for fresh berries and for processor berries for 1951-57, analysis of market outlets for Washington fresh berries based on sales in previous years, and analysis of the competition from other west coast States. The findings of the premarketing season study were presented before meetings of berry growers. A detailed report also was presented at these meetings on the fresh market potential. Emphasis was given to the need for the industry to assemble a large volume of good quality fresh berries and to concentrate on expanding the fresh market outlet because of large carryovers of frozen and canned berries and declining prices for berries sold to freezing and canning plants.

In phase II, positive action and assistance by marketing specialists was undertaken as the 1958 marketing season opened and continued during the season. A description of these efforts follows:

1. Contacts were made with all produce buyers for chainstores and produce distributors in Seattle, urging them to handle and feature fresh raspberries and blackberries. Fruit brokers in Los Angeles, Chicago, Denver, Minneapolis, Spokane, and Salt Lake City also were contacted and provided with buyer information. A sales promotion and information brochure on blackberries was prepared for this purpose.

2. Information on berries was prepared for release over a market-casting network in the Puget Sound area.

3. Marketing specialists observed berries at points of sale along channels of distribution and noted complaints or comments made as to the quality of berries, container suitability, consumer preference, and methods of pricing and merchandising at retail. These observations were reported several times weekly to the berry marketing cooperative and independent shippers.

4. Contacts were made with the U. S. Department of Agriculture concerning the purchase of processed berries for the School Lunch Program and the placing of blackberries and raspberries on the Plentiful Food List. These contacts resulted in favorable action.

Rhubarb.--Assistance to the Washington rhubarb industry in improving marketing methods and expanding outlets was initiated in 1956 with intensive surveys of potential markets, consumer preferences, the competitive situation, and marketing practices. Information obtained in these surveys was analyzed and reported in a publication issued during the preceding year. Marketing specialists of the Washington department used this information as a guide in developing, in conjunction with rhubarb marketing agencies, a promotion and merchandising program which was placed in operation last year in the

Seattle area. These specialists assisted in preparing promotional material, made contacts with wholesale and retail organizations to encourage cooperation with the program, and worked with retailers in improving merchandising methods. One of these retailers cooperated in testing various types of displays. It was found that one of the methods tested increased sales of hothouse rhubarb by about 20 percent.

Activities under this project increased publicity about and consumer information on Washington rhubarb in the newspapers of the State. The program also resulted in some new outlets for frozen rhubarb in the hotel and restaurant trade.

Livestock.--Two studies of problems relating to the marketing of livestock in the State of Washington were made during the year. One of these had to do with the impact of importations of cattle and beef on the demand for and prices of cattle produced in the State. The other related to the effects of reductions in the westbound freight rates on dressed meats to the Pacific Coast States on the packing industry and livestock production in Washington.

Providing special marketing information and basic data (WASH-D-1)

During the past year bulletins relating to county agricultural data were released for the following counties: Benton, Cowlitz, Ferry, Franklin, Kitsap, Kittitas, Island, Okanogan, and Thurston. Previously such bulletins had been issued for the counties of Skagit, Yakima, Whitman, Lewis, Snohomish, Spokane, Stevens, Chelan, Whatcom, Clark, Pierce, and King. Data have been assembled and analyzed for bulletins on Adams, Mason, and Douglas counties. The county bulletin data series is meeting the problem of making county data readily available on a broad public service level. Requests for agricultural statistical data on a county level in the State of Washington have been increasing from fields of public education, civic planning, banking, and business, and from persons and groups in other States interested in Washington local trade areas or farming districts. Such agricultural data were not published before this project was started.

WEST VIRGINIA

Improving marketing methods (WVA-B-1)

Eggs.--Assistance was provided West Virginia egg producers in marketing eggs on a graded basis. Demonstrations were given at auction markets on the proper methods of grading and candling eggs. Auction managers were informed concerning the proper methods of handling and marketing. As a result of this program, one of the auction markets increased the sale of Grade A eggs from 55 to 80 percent of its total sales, and the producers of these eggs received a price premium of about 3 cents per dozen. Another auction market cooperating in the program increased its volume of egg sales by about 170 percent. The 2 auction markets provide outlets for approximately 2,500 farmers in 16 counties.

Fruits and vegetables.--Marketing specialists assisted growers using the grading facilities at the Inwood Farmers' Market in adopting proper grading and packing methods to obtain maximum returns for their peach and apple crops. The packing house at Inwood handled about 62,000 bushels of apples and about 25,000 bushels of peaches, and it is estimated that the growers received about 25 percent more for their fruit than if it had been sold to processors or on an orchard-run basis.

The department, in cooperation with the West Virginia Horticultural Society, continued the program which provides information to about 900 truckers and other buyers on the availability of West Virginia apples, peaches, and vegetables. In connection with this program, more than 85 growers having fruit for sale supplied daily information on quantities, varieties, grades, sizes, and prices sought. The assistance provided in the installation of a hydrocooler at the Inwood Farmers' Market resulted in producers receiving approximately 25 cents more per bushel for the hydrocooled peaches during the 1958 marketing season.

The department continued its program to improve vegetable marketing through shipping point demonstrations of proper grading and packaging methods. A project was initiated during the 1958 season to encourage the buying and selling of sweet corn on a graded basis.

Tobacco.--The tobacco marketing specialist of the department continued to assist growers in improving their methods of harvesting, storing, curing, stripping, grading, and displaying burley tobacco.

Timber.--Work was initiated on a program to inform buyers of the volume, species, grade, and location of West Virginia timber for sale. Plans are to make available to timber producers information on market prices for the various grades and species of timber. Under prevailing marketing conditions, the producer's presale knowledge of the value of his timber is inadequate.

Livestock.--In the livestock marketing service work, emphasis was placed on the proper preparation and handling of animals for market and the buying and selling of livestock on a graded basis. Marketing specialists gave to producers and buyers demonstrations of the grading of livestock in accordance with official standards at auction markets and special sales held throughout the State. During the past year, assistance was provided in conducting 40 feeder calf and feeder cattle sales at which 30,000 head of cattle were marketed. Department specialists assisted in planning 5 special sales at which 200 purebred rams and 3,000 commercial ewes were sold. Assistance was provided in the selection and preparation of animals for the four sales held by the West Virginia Hereford Breeders Association and the West Virginia Aberdeen-Angus Breeders Association.

Other products.--The program to develop outlets for such products as black walnuts, mayapple roots, and Christmas trees was continued. The department helped in securing outlets for approximately 300,000 pounds of mayapple roots, valued at about $60,000.

Providing new basic data and experimental market news (WVA-D-1)

General information.--Poultrymen and dairymen were again provided with current information on trends in production, prices, cost of feeds, and the general outlook. This information was released each month to a mailing list of over 1,000 persons and was also carried by newspapers, trade publications, and radio stations. This type of information is essential in aiding producers and marketing agencies in developing sound marketing programs.

County data for crops and livestock were assembled and prepared for publication in the bulletin "West Virginia Agricultural Statistics 1958."

The results of the tree survey of commercial apple and peach orchards in Berkeley, Hampshire, Jefferson, and Morgan counties were published and copies of the bulletin were sent upon request to fruit growers, fruit associations, and other interested persons.

Livestock.--The experimental market news program which reports daily grade-price quotations for cattle and hogs at 9 West Virginia auction markets and veal, calf, and lamb grade-price quotations at all 23 auction markets in the State was continued. Many favorable comments from producers and the livestock industry attesting to the value of this program have been received by the West Virginia Department of Agriculture.

WISCONSIN

Improving quality (dairy products) (WIS-A-1)

In July 1957, work was initiated with plants manufacturing cottage cheese to evaluate the quality of the product they were producing and to assist them in correcting the quality defects detected. This work, which is in cooperation with the University of Wisconsin, was continued and expanded during the past year. Several of the quality factors showed improvement as the work progressed. However, the need for much more work is indicated.

Further tests were conducted to ascertain the cause of certain quality defects in whey cream butter. These tests, conducted in cooperation with the Dairy Department at the University of Wisconsin, involved a study of the three general conditions in the cheese operation influencing whey cream quality, namely, time and temperature, starter influence, and rennet action. Results of the work indicate that cream which has been bleached (in the manufacture of Provolone type cheese), or cream obtained by skimming water from the hot curd working tubs, should not be used in butter manufacture; also that the initial butterfat quality is very important in determining the storage life of whey cream butter. Storage at 38°F. was found to be more effective in retarding deterioration in whey cream butter than storage at 55°F. Temperatures as low as 15°F. for storage periods up to 6 months did not prevent deterioration in whey cream butter of a low initial quality score.

Activities to improve the quality of nonfat milk powder produced in Wisconsin were continued. Surveys of the operations and equipment were conducted at 12 plants, 4 representative of plants using only Grade A milk, 4 using only Grade B milk, and 4 using a blend of these 2 grades. These plants were rated in accordance with a detailed review and examination of each plant's fieldwork program, receiving room operation, cooling procedures, condition of milk transport tanks, equipment sanitation and quality control, and direct microscopic counts of the skim milk and powder. Analysis of the data obtained in the surveys has not been completed.

Activities were continued to improve the quality of milk received by cheese factories. Samples of patron's milk were analyzed by the resazurin test and the direct microscopic clump count method. Where these tests, and tests made to determine if antibiotics or other inhibitory substances were present, revealed a quality problem, the specialists contacted the patrons involved, explained and demonstrated to them the nature of the quality defect, and assisted them in taking corrective action. The tests showed the presence of antibiotics and other inhibitory substances in a high percentage of milk deliveries to the plants with which the quality work was conducted. This points up the need for a regular program of testing for such substances. This is important since the presence of these substances in sufficient concentration has a deleterious effect upon cheese quality.

The program of butter-quality improvement was continued. Butter scoring 91½ or more showed an increase of 1.2 percent for 1957 over 1956, but "undergrade" butter--89 score or below--showed an increase of 1.8 percent. This increase in undergrade butter is attributed to the proleolytic flavor defect. The conclusion is that with the trend toward lower acidity in the cream used for butter manufacture this defect has a more favorable environment for development. Specialists organized a series of meetings with creamery operators at which methods and procedures for correcting this defect were presented. Since the butter-quality improvement program got underway in 1951, the percentage of Wisconsin butter scoring 91½ or more has increased from 41 percent to nearly 60 percent; during this same period the percentage of undergrade has gone down from 37 percent to about 7 percent.

Providing technical assistance to marketing agencies in improving operations (WIS-C-1)

Dairy products.--The operations of 22 dairy processing plants, with an annual volume of about 1.2 billion pounds of milk, were surveyed and analyzed to compare processing costs and determine where cost reductions could be made. The analysis disclosed that plants performing identical operations had cost differences of as much as 30 cents per hundredweight of milk processed. The information disclosed by the survey of each plant was presented to plant management and the board of directors, along with the generalized data for all plants surveyed. At the same time, recommendations were made concerning steps which management could take to reduce costs. It is reported that this work stimulated most of the plants involved in the survey to effect improvements

in equipment, plant layout, and operating methods which enabled them to reduce handling and processing costs during the past year by the equivalent of about 5 cents per 100 pounds of milk received. For the 17 plants which made these improvements, savings amounted to approximately $325,000.

Livestock.--Assistance was given the rapidly expanding feeder cattle industry in establishing facilities and organizing special sales to enable producers to realize maximum returns consistent with prevailing supply and demand conditions. Grading clinics were held at a number of markets over the State to encourage the development of marketing of all species of livestock on a grade-price basis. Exhibits of carcass grading were staged at the Wisconsin State Fair, livestock shows, and similar events.

Fruits and vegetables.--Marketing specialists of the Wisconsin Division of Markets gave assistance to the potato and apple industries in considering the need for marketing regulations under the authority of the Wisconsin Agricultural Marketing Act, enacted in 1957. The apple industry approved operation of a marketing order program under this legislation, but the potato industry did not.

Strawberry growers in the four major strawberry areas of the State were organized to improve the marketing of their product. Marketing specialists also assisted in this effort by conducting demonstrations of proper grading and packaging methods. These demonstrations were attended by nearly 200 growers. By improving the grade and pack and centralizing the sales functions, growers in this organization received substantially higher returns for their berries.

In the past, the lack of information on supplies and price of apples at the local market level has resulted in much price variability not justified by prevailing supply and price conditions at wholesale and retail. The State Department of Agriculture initiated an experimental program to provide apple growers with needed supply and price information.

A marketing clinic for the sour cherry industry was sponsored jointly by the Wisconsin Department of Agriculture, Wisconsin Agricultural Experiment Station, and the Door County Cherry Growers Association. Several ideas presented at this clinic will provide the basis for constructive action to improve the marketing of processed cherries. Among the changes recommended were the adoption of a different size of can and the use of syrup rather than water as a packing medium.

Tobacco.--The Wisconsin department expanded its program of assistance to tobacco growers and handlers to include work designed to (1) improve quality and methods of preparation for market, and (2) achieve more uniform grades. Emphasis on these phases of marketing Wisconsin Types 54 and 55 tobacco is needed at this time because of the growing use of "homogenized" tobacco for binder purposes in cigar manufacture. This has resulted in a shift in demand and restriction in outlets for certain grades of these types

to which the grower must adjust in his harvesting and grading practices. The program of providing marketing information to the Wisconsin tobacco industry was continued. Data on prices and sales were summarized and published weekly for the season.

Providing new basic data (WIS-D-1)

Considerable progress was made this past year toward meeting the needs for marketing data in Wisconsin. Marketing agencies, both public and private, however, are steadily developing new data requirements which are reflected in the activities of this project. Requests for marketing data exceed the resources for meeting them. Activities under this project this past year have been directed toward keeping pace with these greater demands.

Dairy products.--This past year has brought about much progress in collecting and processing marketing data for dairying. Accomplishments in this work are listed as follows:

Butter

Many new techniques in manufacturing and marketing butter are being employed. Compulsory retail grading and labeling has also had a striking impact on marketing of Wisconsin butter. Some surplus Grade A milk supplies are now being shifted for marketing as butter and dry milk. Measurement of these new developments has been completed under this project, and results are to be published in a bulletin on Wisconsin butter. The report on butter will round out the earlier data completed under this project for American cheese, Swiss cheese, and quality milk. Of special importance are such items as the following: (a) New problems created by the shift from cream to whole milk for the manufacture of butter; (b) new packaging and shipping techniques which are becoming more widespread in the industry; (c) the considerable amount of butter that is being distributed to the trade in bulk shipments; and (d) new needs in butter marketing data created by the trend towards varied sizes of retail prints. The competition provided by margarine for the butter market is also of prime importance to Wisconsin dairy farmers. Data on volume of butter production by plants, multiple product operations, and locations of butter processors are made available for the first time to aid in the production and distribution of this rapidly expanding industry in Wisconsin. The forthcoming bulletin will contain these new data and update much of the data on Wisconsin butter supplies.

Local milk supplies and markets

Another phase of dairy work completed under this project was a survey of local milk markets and supplies. An investigation was made of milk marketing into and out of Trempealeau County in western Wisconsin. It was found that nearly half of the milk processed by Trempealeau County dairy plants came from sources outside the county. About one-sixth of the milk produced in the county was sold to plants in other counties. Studies such as this give valuable insight into the complex problems of milk movement and handling.

Italian cheese varieties

Because of requests by people concerned in the Italian cheese industry, a survey was made this past year of the different varieties of Italian cheese produced in Wisconsin. Over the past several years production of Italian cheese in this State has more than doubled. Cheese producers were requested to supplement their regular reports on cheese production with reports on the production of Italian cheese by type and variety. This information was urgently needed to measure the changes which have occurred in Italian cheese production because of the huge increase in demand for soft types such as are used in pizza pie. To meet this need, estimates were made of and information released on 1957 Italian cheese production by varieties. In all, 55,000,000 pounds of Italian cheese were produced in the State in 1957. The leading varieties were Provolone, Parmesan, Mozzarella, and Romano.

"Wisconsin Dairying"

The monthly publication, "Wisconsin Dairying," was continued. This provides current information about market supplies and price changes throughout the dairy industry. In addition, a number of feature articles were included in the publication each month to keep the industry informed of current marketing developments. Some of the materials made available to the Wisconsin dairy industry through this medium during the past year were special studies on calf losses and their effect on the marketing of dairy calves in Wisconsin; new developments in the seasonal changes in the marketing of milk due to a leveling out of the freshening pattern; reports showing the production of butter and cheese by size of plant and the concentration of the supply of these products into larger, more integrated dairy plants; and the addition of a number of new tables. The mailing list for this publication of over 10,000 includes about 6,000 milk producers, dairy leaders, and marketing agencies throughout the State, and is very well received by the industry generally.

Other dairy products--whey, fluid milk, and new products

Marketing problems in the State's dairy industry continue to arise because of the tremendous shifts going on in the consumption of milk and dairy products. In addition to the major lines of activity described above, information on the supplies and marketing of a number of other dairy products such as cottage cheese, the utilization of whey, and the production of dried whole milk has been brought together. Another area of increased emphasis on marketing of Wisconsin milk concerns the development of the Grade A and fluid markets. New Federal marketing orders are in prospect for about 30 additional counties in the State. Moreover, Federal marketing orders which have gone into effect in some of the surrounding States have a direct influence on the marketing of Wisconsin Grade A supplies. During this past year the regular report has been supplemented in all of these phases with special information concerning the specific marketing problems involved.

In a short time the marketing agencies and dairy organizations of the State will begin a nationwide program to secure markets for dry whole milk products which can be sold through the grocery stores without refrigeration. Data for numerous specific nonpublished inquiries have been supplied to the people working on these marketing analyses. It is contemplated that these data will be consolidated in the not too distant future into formal reports.

Livestock.--The livestock work continues to require heavy emphasis. Projects completed or in progress are as follows:

Feeder pig prices

The monthly publication of feeder pig prices has been widely accepted throughout the feeder pig industry, both within and outside of Wisconsin, and will be extended. At present feeder pig prices are issued monthly, although there is continued demand for this service at more frequent intervals. A complete series of monthly feeder pig prices over the past 4 years has been published; it provides background data which are much in demand throughout the industry. Price data are obtained from over 1,000 reporters throughout the State who report the price of feeder pigs in their area as of the first of each month. It is hoped that semimonthly data may be made available in the future.

Beef cattle marketings

The importance of beef cattle in Wisconsin is emphasized by the fact that beef production in the State has tripled since 1950. At the present time Wisconsin packers report that nearly half of the fat cattle being slaughtered in the State now come from Wisconsin farms. The shift from dairy to beef cattle represents a broad and sweeping change in the livestock structure on Wisconsin farms. The ground work has been completed for the issuance of quarterly reports of cattle-on-feed operations in this State to commence in January. Preparations are underway for the publication of a comprehensive bulletin giving the basic supply patterns and seasonal marketing and price characteristics of Wisconsin's beef cattle industry.

Poultry and eggs.--Wisconsin's poultry industry is rapidly changing. The vertical integration that has occurred within the poultry industry in the State continues to make the collection of data on this industry difficult, and only limited data have been published. A complete enumeration was made of all hatcheries in the State. This provides a firm benchmark upon which to base future sample indications and thus increase the accuracy of forthcoming data relating to the poultry industry and the rapidly expanding hatchery business.

Basic farm and market price data.--The program of supplementing the basic farm and market price data available from regular operations was consolidated and enlarged with the publication of a bulletin and marketing handbook on Wisconsin farm and market prices. This handbook brought together much of the special and regular price and market data that have been collected

over the years. The project on marketing data by counties was completed with the issuance of the last of the county book series in June.

Cranberries.--The results of the cranberry survey completed last year have been published in Special Bulletin No. 70 entitled "Cranberries of Wisconsin." This publication gives a complete analysis of cranberry production and marketing in Wisconsin. Wisconsin is now the second ranking State in cranberry production and has marketing outlets in all parts of the United States.

Processing vegetables.--A survey of the Wisconsin processing vegetable industry was completed and the results published. Special emphasis was placed on geographical production patterns and processing plant locations. This publication brought together in a single unit much of the new data on this industry for which there has long been an increasing demand.

WYOMING

Improving the quality of eggs, meat, and dairy products (WYO-A-1)

The program consisted of informative meetings, demonstrations, and assistance in the application of uniform grades and in the proper methods of storing, handling, packaging, and displaying eggs, poultry, meats, and dairy products. Specialists of the Wyoming Department of Agriculture provided assistance to cream stations, individual slaughtering and processing plants, and retailers in improving the processing, grading, storing, handling, and displaying of meat and dairy products. Tests on milk and cream were made at the time of delivery to dairy plants to check on quality standards, and when these tests revealed substandard quality, the producers concerned were assisted in eliminating the cause of the problem.

As a result of the quality program on eggs, the following marketing improvements have been made: All eggs classified below Grade B have been eliminated from Wyoming retail markets; eggs are labeled in a more uniform and informative manner; market outlets for eggs have been expanded; and consumers can buy increased quantities of quality eggs. In addition, the program has enabled producers and handlers to comply with the provisions of the State egg law.

The assistance provided through the dairy quality program has been credited with the following results: As of July 1957 less than half of the 420 dairy producers in the Star Valley area of the State were able to market milk that met the State's minimum standard for Class II milk; however, as of September 30, 1958, the 420 producers in this area were able to comply with the State's standards of quality for Class II milk. On the basis of recommendations by specialists, these producers made additions or changes in equipment, milk houses, and other facilities for the proper handling of milk.

It is also reported that as of September 30, 1958, all the milk produced in the Sheridan milk shed met the State's requirements for sale as Class I milk.

The service program to improve the quality of meat and meat products has been instrumental in strengthening consumer acceptance of locally processed meat which has resulted in expanding market outlets for Wyoming livestock products.

The work initiated under this project was terminated as a matched fund activity on July 1, 1958, but plans are to continue the quality improvement program for eggs, meat, and dairy products as a State-financed activity.

Supplying basic data (WYO-D-1)

Information on the movement of Wyoming cattle was again obtained. These data were used in the preparation of charts and tables in the bulletins published under the titles of "Movement of Wyoming Cattle" and "Wyoming Agricultural Statistics and Information." The data were also presented in monthly reports for each county showing a breakdown of the intrastate and interstate movement of cattle. These reports were released to ranchers, livestock auction operators, feeder buyers, transportation agencies, and other interested persons. Estimates were compiled and prepared for publication on irrigated and nonirrigated crop acreage and on in-shipments and out-shipments of fluid milk and cream.

Data on the wool incentive payment program were analyzed to determine the frequency of distribution of the size and the value of individual wool clips and the months in which clips were sold.

SOME RECENT MARKETING PUBLICATIONS BY STATES

GENERAL

GEORGIA

Georgia Agriculture, State Department of Agriculture, Atlanta, May 1958.

Georgia State Farmers Markets, State Department of Agriculture, Atlanta.

ILLINOIS

Illinois Agricultural Marketing Statistics, State Department of Agriculture, Springfield, October 1957.

Illinois County Agricultural Statistics, Sangamon County, State Department of Agriculture, August 1958.

MINNESOTA

Minnesota Agriculture 1858-1958, Crop and Livestock Reporting Service, St. Paul, May 1958.

Minnesota Agricultural Statistics, Crop and Livestock Reporting Service, St. Paul, June 1958.

NEW JERSEY

New Jersey Agricultural Statistics 1945-56, Crop Reporting Service Circular 404, Trenton, July 1957.

PUERTO RICO

A Study of Marketing Facilities and Practices for Food and Related Products, Commonwealth Department of Agriculture, San Juan, January 1958.

SOUTH CAROLINA

County Agricultural Statistics Series (Anderson, Lancaster, Marion, Richland, Spartanburg, and Sumter Counties), South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, Clemson, 1958.

WISCONSIN

Wisconsin Rural Resources, Washburn County, Crop and Livestock Service, Madison, April 1958.

WASHINGTON

Series of county data bulletins (Benton, Ferry, Franklin, Island, Kitsap, Kittitas, Okanogan, and Thurston counties), State Department of Agriculture, Olympia.

COTTON

LOUISIANA

Louisiana Cotton Gins, Cotton Seed Oil Mills, and Cotton Seed Delinting Plants, State Department of Agriculture and Immigration, Baton Rouge, January 1958.

SOUTH CAROLINA

South Carolina Cotton Statistics--Trends 1866-1957, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, Clemson, August 1958.

DAIRY

LOUISIANA

Louisiana Annual Milk Marketing Report, 1957, State Department of Agriculture and Immigration, Baton Rouge.

NEW YORK

Statistics Relative to the Dairy Industry in New York State, 1956, State Department of Agriculture, Albany, November 1957.

WISCONSIN

Wisconsin Swiss Cheese, Crop Reporting Service, Bulletin No. 339, Madison, June 1957.

WYOMING

Wyoming Dairy Statistics, 1924-1957, Crop and Livestock Reporting Service, Bulletin No. 20, Cheyenne, July 1958.

FOREST PRODUCTS

PENNSYLVANIA

Pennsylvania Christmas Tree Survey, 1957, Crop Reporting Service, Harrisburg, May 1958.

FRUIT

CALIFORNIA

Acreage Estimates, California Fruit and Nut Crops, State Department of Agriculture, Sacramento, June 1958.

Increasing the Sale of Fresh Peaches in California, State Department of Agriculture, Marketing Survey Report No. 15, Sacramento, June 1958.

KENTUCKY

1958 Kentucky Strawberry Buyers Guide, State Department of Agriculture, Frankfort.

MICHIGAN

Small Fruit Virus Disease Field Manual, Michigan Department of Agriculture and Michigan State University, Lansing.

NEW YORK

Fruit Tree Survey in Lake Ontario Area, New York, 1957, Crop Reporting Service, January 1958.

PENNSYLVANIA

Pennsylvania Fruits, 1957, Crop Reporting Service, Harrisburg, January 1958.

WASHINGTON

Washington Statewide Survey of Apple Packs, Washington State Department of Agriculture, Olympia, May 1957.

WEST VIRGINIA

Commercial Apple and Peach Survey, Crop Reporting Service, Charleston, January 1958.

WISCONSIN

Cranberries of Wisconsin, Crop Reporting Service, Special Bulletin No. 70, Madison, December 1957.

GRAIN

KANSAS

Kansas Wheat Quality Survey 1958, Crop and Livestock Reporting Service, Topeka, August 1958.

MINNESOTA

Minnesota Corn Production and Marketing, Crop and Livestock Reporting Service, St. Paul, June 1958.

Minnesota Flax and Soy Bean Industry, Supplement No. 1, Crop and Livestock Reporting Service, St. Paul, June 1957.

SOUTH CAROLINA

South Carolina Corn Statistics--Trends 1870-1957, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, Clemson, May 1958.

South Carolina Barley Statistics--Trends 1935-57, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, Clemson, March 1958.

South Carolina Oats Statistics--Trends 1869-1957, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, May 1958.

South Carolina Peanut Statistics--Trends 1919-57, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, July 1958.

South Carolina Soybean Statistics--Trends 1945-57, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, May 1958.

SOUTH CAROLINA

South Carolina Wheat Statistics--Trends 1869-1957, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, May 1958.

LIVESTOCK

NEW YORK

Statistics Relative to Livestock Industry in New York State, 1941-57, Crop Reporting Service, Albany, October 1957.

SOUTH CAROLINA

South Carolina Livestock Statistics--Trends 1910-58, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, Clemson, June 1958.

WASHINGTON

Marketing Analysis Studies of Freight Rate Effects on Washington Meat Packing and Livestock Production, State Department of Agriculture, Olympia, August 1958.

Import Cattle and Meat Survey, State Department of Agriculture, Olympia, May 1958.

POULTRY AND EGGS

GEORGIA

Poultry Facts, Georgia Crop Reporting Service, Athens, May 1958.

The Egg and Georgia, State Department of Agriculture, Atlanta, 1958.

LOUISIANA

Louisiana Processors, Dealers, Distributors of Poultry and Eggs, State Department of Agriculture and Immigration, Baton Rouge.

MARYLAND

Laying Flocks in Maryland, Crop Reporting Service, College Park, June 1958.

PENNSYLVANIA

Egg Marketing for Producers in Pennsylvania, Crop Reporting Service, Harrisburg, November 1957.

Candling and Grading Manual, State Department of Agriculture, Harrisburg, 1958.

SOUTH CAROLINA

South Carolina Poultry Statistics--Trends 1934-58, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, Clemson, June 1958.

TOBACCO

SOUTH CAROLINA

South Carolina Tobacco Statistics--Trends 1939-56, South Carolina Crop Reporting Service and South Carolina Agricultural Experiment Station, Clemson, May 1958.

VEGETABLES

NEW YORK

Vegetable Crop Statistics in New York State, 1949-57, Crop Reporting Service, Albany, April 1958.

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